



# FLIGHT

First Aero Weekly in the World.

Founder and Editor: STANLEY SPOONER.

A Journal devoted to the Interests, Practice, and Progress of Aerial Locomotion and Transport.

OFFICIAL ORGAN OF THE ROYAL AERO CLUB OF THE UNITED KINGDOM.

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## Flight.

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## EDITORIAL COMMENT.

### Air Attack and London.

If an example were required, more convincing than a year of gasbag speeches, to emphasise the vacillating policy of the Government in respect to the prosecution of the war, surely it is to be found in the screaming farce of the protection of London from raiders of the air. We do not doubt that, since the subject of the inadequacy of the arrangements was first brought into prominence by the persistent attention given to the Metropolis by the Zeppelin pirates, a good deal of progress has been made to greater efficiency. In fact, we know that very strong and successful efforts have been made to ensure the warmest reception to any airship venturing over British soil in the future, so that from that point of view the populace may have more peaceful minds as to their own greater safety. But, in the name of common-sense, for what reason is all this juggling between civil, naval and military authorities going on, to the upsetting of every atom of efficiency which may have been previously achieved? These violent changes from one authority to another cannot but have a disquieting effect upon the whole organisation. We are not in any way suggesting that the War Office is not the most reasonable and most efficient authority to control the defences already, and in the future to be,

established, but we do protest against what appears to be the highly dangerous vacillation in first appointing one authority and then another, dividing up the various duties of different units told off to cope with events as they arise from the airship visits, and then swinging round entirely and transferring the responsibilities on to some other body. When matters had come to such a pass that it was quite evident to the most unobservant of the public that the provision of proper armament and plans of defence were almost criminally conspicuous by their absence, Sir Percy Scott was grabbed hold of by the Government, and in hot haste placed in charge of the gunnery portion of the defences, and the announcement which was made on September 13th last was hailed with approval by one and all. An immediate improvement was apparent, following this appointment, and, without doubt, we are in a much more secure position at the present moment to beat off any enemy air attacks than London has ever been. The primary authority at this time, and as late as October 26th, as stated by Mr. Balfour, was the Admiralty. Again it was felt that matters had settled down into their proper groove, as, the Admiralty being naturally called upon to protect our seahome, the Navy would be in the position of tackling any foreign craft right away from out at sea to their objective inland, and so ensure harmonious working throughout. But doubt arose within a couple of days when Mr. Balfour further qualified his first statement by saying that the military authorities were responsible for sending up the military aeroplanes and the Navy for sending up the Naval aeroplanes. Here at once loomed large a glorious chance for the clashing of divided authority, in spite of the assurance of the First Lord that there was "full co-operation between the gunnery defences of London and naval and military flying services." It is hardly to be wondered at, therefore, that by November 11th, Mr. Balfour had come to the conclusion that "the organisation is not the most perfect that can be advised, but I do not quite see how you could work it with one authority. At any rate it might not conduce to things going more smoothly."

And now, on December 13th, "hey presto, change!" and the whole bag of tricks is announced in Parliament to be switched over to a single authority: the War Office. In the same breath it is also notified that Sir Percy Scott will be no longer in charge of the air defences. Moreover, at the time of going to press it is reported that the War Office has decided not to take over the naval personnel of the anti-aircraft defences, which tends to make confusion worse confounded. What exactly is to

become of the organisation hitherto set up, remains for the moment a mystery, but if we are to commence all over again—well, it should be a lively time during Christmas and the next month for Londoners. That the gentle Zep-Huns will appreciate the temporary upheaval of affairs is pretty certain, and they will not be true to their traditions if they do not speedily take advantage of the opening offered for their activities, with safety. We can hardly, however, credit such fatuous ineptitude, and give the authorities credit for more commonsense than to perpetrate such a shocking *faux pas*. At least one gleam of comfort is vouchsafed us. Admiral Sir Percy Scott, it is understood, is to complete the important developments upon which he has been engaged since his appointment in September, before the General Control under the new arrangement is to be handed over to the Director of Home Defence, General Shaw. Of this latter information there was ample evidence on Tuesday of this week, when Sir Percy was at the Horse Guards, active in the direction of the Navy's portion of the gunnery defences. A sheaf of questions upon the subject are to be fired off in Parliament this week, which may tend to elucidate the position, and we can only hope that the present transfer of London's defences to the control of the War Office will see the last of the shuttlecock business which has been so conspicuous with this little side issue of the European war. So long as the W.O. is recognised as the sole authority in control, there is not likely to be any cause for grumbling, as with General Sir Francis Lloyd, commanding the London District, responsible under General Shaw, it may be felt London's welfare is in good hands, although, except for the very extraordinary hereditary objection to the mixing, like oil and water, of Navy and Army control, we consider it highly regrettable if Sir Percy Scott should not remain in command of the gunnery arrangements.

The  
"Königs-  
berg's"  
End.

For the aviation world, Vice-Admiral King Hall's despatch, to which reference was made in "FLIGHT" last week, and which appears in the current issue more fully, was a gratifying document. Its testimony to the remarkable work of the members of the Royal Naval Air

Service, who were acting in conjunction with the vessels under the Vice-Admiral's command, was perhaps no more than all who appreciate the point that service flying has reached would anticipate. But the wording of the praise for this branch of our Navy is so straight, that it brings home in no uncertain way the vital necessity of aircraft co-operating with our fleet upon all and every conceivable opportunity possible. It is made perfectly clear by Vice-Admiral King Hall that without the invaluable assistance of the aircraft his flotilla might in all probability be still riding on the waters of the Rufigi River in German East Africa, with the "Königsberg" away up the river in a practically unassailable position. As it was, this German free-lance was able to be given its quietus in a matter of days, once the preliminary arrangements had been got through. The unstinted praise meted out to both flying officers and men employed in the expedition is but one more earnest of what support the expansion of the Flying Services is likely to get from all the high commands which have had experience of their actual worth during the present hostilities. That the services in this particular case were of exceptional merit is particularly emphasised in the final paragraphs, referring to the aviator's work, in Vice-Admiral King Hall's despatch. These are so suggestive that we give them repetition below. Thus writes the Vice-Admiral:—

"Most serious risks have been run by the officers and men who have flown in this climate, where the effect of the atmosphere and the extreme heat of the sun are quite unknown to those whose flying experience is limited to moderate climates. "Bumps" of 250 feet have been experienced several times, and the temperature varies from extreme cold when flying at a height to a great heat, with burning, tropical sun, when on land.

"In the operations against the "Königsberg" on July 6th both the *personnel* and *matériel* of the Royal Naval Air Service worked to the extreme limit of endurance. The total distance covered by the two available aeroplanes on that date was no less than 950 miles, and the time in the air, working watch and watch, was 13 hours.

"I will sum up by saying that the Flying Officers, one and all, have earned my highest commendations."



## The Roll of Honour.

THE following casualties have been announced by the Secretary of the Admiralty:—

Under date December 10th:

### Missing.

Flight-Commander Charles E. Robinson, R.N., Capt., R.M.L.I.

Under date December 11th:

### Seriously Injured.

Flight Sub-Lieutenant George G. A. Armitage, R.N.

### Slightly Injured.

Flight Sub-Lieutenant Stanley Kemball, R.N.

Under date December 12th:

### Died of Injuries.

Probationary Flight Sub-Lieutenant George G. A. Armitage, R.N.

Undated from France:

### Wounded.

Gunners C. A. Dunn and J. Potter, R.M.A. Anti-Aircraft Brigade.

The following casualties in the Expeditionary Force have been reported from General Headquarters:—

Under date December 3rd:

### Wounded.

Lieutenant G. L. P. Henderson, Royal Flying Corps.

Under date December 6th:

### Missing.

Second Lieutenant A. R. H. Browne, Royal Flying Corps.  
Lieutenant G. A. Porter, R.F.A. and R.F.C.

Undated:

### Previously reported Missing, now reported Prisoner of War.

Lieutenant A. C. Collier, King's Own (R. Lanc. Regt.), attached R.F.C.

The following casualties among the Indian Forces have been reported:—

Undated from the Persian Gulf:

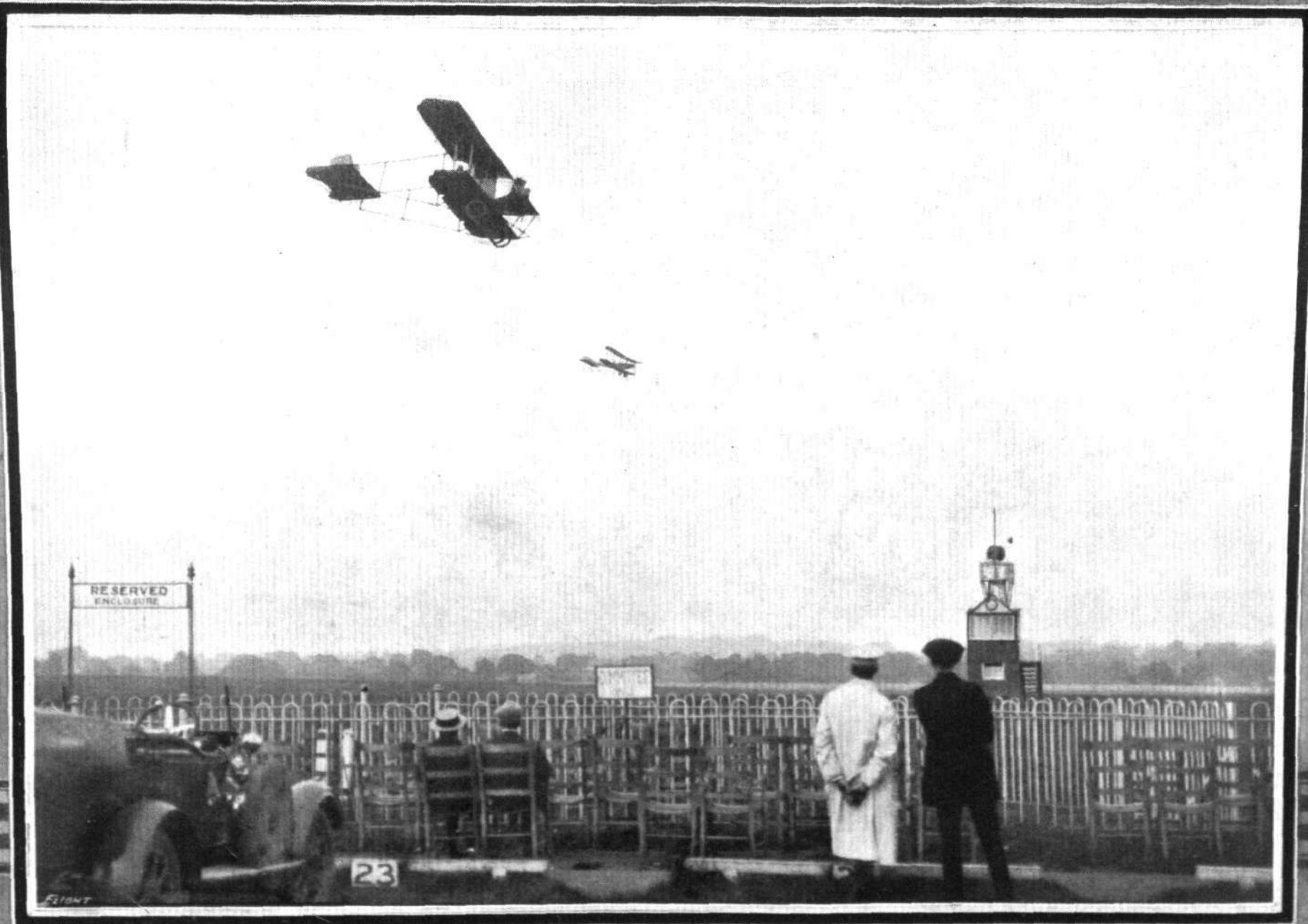
### Previously Unofficially now Officially reported Prisoners of War.

Second Lieutenant E. J. Fulton, 1st Lancers, attached R.F.C.  
Major H. L. Reilly, 82nd Punjabis, attached R.F.C.  
Captain F. C. C. Yeats-Brown, 17th Cavalry, attached R.F.C.

The following casualty, previously shown as "reported from the Mediterranean Expeditionary Force," should have been shown as "reported from the Persian Gulf":—

### Officially reported Missing, and Unofficially reported Prisoner of War.

Captain T. W. White, Australian Flying Corps.



NECK AND NECK PAST THE ENCLOSURES AT HENDON.—Mr. F. H. Moore on his biplane, and a Blackburn B.E.2c.

FLIGHT



# AIRCRAFT WORK AT THE FRONT.

## OFFICIAL INFORMATION.

### British.

*General Headquarters, Dec. 9th.*

"BAD weather has limited activity in the air, but, in spite of very adverse conditions, our airmen have been able to do useful work. Two machines which went on reconnaissance on the 5th have not returned."

*General Headquarters, Dec. 12th.*

"On the 8th, sixteen of our aeroplanes bombed a store depôt at Miraumont and an aerodrome at Hervilly. This attack was carried out in a high westerly wind, which made flying difficult. All machines returned safely, and considerable damage is believed to have been done to both objectives."

*Admiralty, Dec. 14th.*

"Flight Sub-Lieutenant Graham, R.N.A.S., in an aeroplane with Flight Sub-Lieutenant Ince, R.N.A.S., as observer, whilst on patrol off the Belgian coast at about 3.15 this afternoon, sighted a large German seaplane and gave chase. After a severe engagement the German machine was hit and fell. Before reaching the water it burst into flames and at the moment of striking exploded. No trace of the pilot, passenger, or machine could be found."

"Flight Sub-Lieutenant Graham's machine was severely damaged by machine gun fire and fell into the sea, but both officers were picked up and safely landed."

### French.

*Paris, Dec. 8th. Evening.*

"In Champagne, in view of the activity of the enemy's artillery, ours entered into action with great violence. Observations made from our aircraft enabled us to ascertain the efficacy of our fire."

"This morning one of our aviators, pursuing a fast German machine at an altitude of 3,000 yards, succeeded in getting within twenty yards of the latter, and attacked it with his quick-firing gun. The enemy aeroplane immediately caught fire and blew up. Both its occupants fell within our lines near Tilloloy."

*Paris, Dec. 12th. Evening.*

"This morning a British cargo boat, being stranded near the Belgian coast, three German hydroplanes attempted to sink it with bombs. Allied naval aeroplanes, including one of ours, attacked them and put them to flight, whilst French torpedo-boats from Dunkirk refloated the ship under the fire of a German battery."

"On December 8th a Turkish aeroplane unsuccessfully bombarded our bivouacs at Seddel Bahr."

*Paris, Dec. 14th.*

"This morning one of our air flotillas, composed of eleven aircraft, dropped a number of bombs of 155 and 90 millimètres on the railway station and lines at Mulheim. Another flotilla of twenty-two French aircraft dropped bombs with equal success on the enemy's installation at Hauriaucourt. Lastly, a third party of twelve aircraft effectively bombed German works south of Hampont, in the region of Château Salins, and at the Château of Burthecourt. Our escorting aircraft attacked and routed a flotilla of five enemy aircraft."

### Russian.

*Petrograd, Dec. 8th.*

"One of our heavy batteries forced a German airship to land in the region of Metzendorf, north of Baldon."

Our bombardment was maintained upon the vicinity of the spot where the airship had descended and a loud explosion was heard, probably caused by the destruction by our fire of the airship or some other receptacle containing gas."

*Petrograd, Dec. 10th.*

"Near Khumskest-Kremenetz an Austrian aeroplane fell in our lines."

### Italian.

*Rome, Dec. 10th.*

"An enemy aeroplane dropped some bombs in the Dogna valley, but did no damage."

### Montenegrin.

*Cettinje, Dec. 7th.*

"On the morning of December 6th two Austrian aeroplanes flew over Cettinje, dropping eight bombs and causing insignificant material damage. One bomb fell on the tennis-court of the British Legation, and another on the edge of the garden of the French Legation, shattering some windows. King Nicholas instantly proceeded to the two Legations to visit the British and French Ministers."

*Cettinje, Dec. 9th.*

"On December 8th, an Austrian aviator threw three bombs on Scutari. One Serbian soldier was killed."

"An Austrian aeroplane has dropped bombs on Cettinje without any result."

*Cettinje, Dec. 10th.*

"On December 9th, an Austrian aeroplane dropped several bombs on Scutari, aiming at the barracks outside the town, but without any effect."

*Cettinje, Dec. 13th.*

"On December 11th in the morning two Austrian aeroplanes dropped seven bombs on Scutari without doing any damage."

"In the afternoon five other aeroplanes flew over Antivari and dropped 16 bombs. Two of the bombs fell in the gardens of Prince Danilo's villa. Another exploded on some shops belonging to the Tobacco Régie, but happily without doing any serious damage. Two others which fell at Dulcigno killed a few cattle."

### German.

*Berlin, Dec. 9th.*

"South of Bapaume we forced a French aeroplane to land, and captured the occupants."

### Austrian.

*Vienna, Dec. 8th.*

"Everywhere aeronauts are participating in engagements against the remnants of the Serbian army."

*Vienna, Dec. 11th.*

"Yesterday afternoon one of our seaplane squadrons dropped bombs on the railway station, the electric works and military objects at Ancona with very good results. In spite of shrapnel fire from several guns and very unfavourable weather all aeroplanes returned unharmed."

*Vienna, Dec. 13th.*

"Our aviators dropped bombs on the camp near Berane with success."

## Turkish.

Constantinople, Dec. 8th.

"Irak Front . . . two freight barges were captured, one of which contained two aeroplanes and a quantity of flying apparatus. So far altogether six enemy aeroplanes have been captured."

Constantinople, Dec. 10th.

"Irak Front.—The aeroplanes we captured have

been repaired, and are now being used against the enemy."

"Dardanelles.—On December 8th, near Akbach, we brought down an English aeroplane. The aeroplane and the aviators were completely burnt."

Constantinople, Dec. 14th.

"Enemy armoured cruisers, assisted by an observation balloon, bombarded our position near Anafarta (near Suvla Bay)."

## THE BRITISH AIR SERVICES.

UNDER this heading are published each week the official announcements of appointments and promotions affecting the Royal Naval Air Service and the Royal Flying Corps (Military Wing) and Central Flying School. These notices are not duplicated. By way of instance, when an appointment to the Royal Naval Air Service is announced by the Admiralty it is published forthwith, but subsequently, when it appears in the LONDON GAZETTE, it is not repeated in this column.

## Royal Naval Air Service.

THE following appeared among the Admiralty announcements of the 8th inst. :—

N. R. Cook, T. H. Newton, and T. R. Holden, all entered as Probationary Flight Sub-Lieutenants for temporary service, with seniority of Dec. 7th, and appointed to "President," additional.

O. S. Stiles and H. W. Wright have been granted temporary commissions as Sub-Lieutenants (R.N.V.R.), with seniority respectively of Dec. 6th and 7th, and both appointed to "President," additional.

The following appeared among the Admiralty announcements of the 9th inst. :—

Probationary Flight Sub-Lieuts. V. E. Sieveking and C. Day, both granted temporary commissions as Sub-Lieutenants (R.N.V.R.), with seniority of Dec. 8th, and appointed to "President," additional, for R.N.A.S.

Lieut. (19th Canadian Infantry Bn.) J. A. Ramsay, entered as Probationary Flight Sub-Lieutenant, for temporary service, with seniority of Dec. 8th, and appointed to "President," additional, for R.N.A.S.

The following appeared among the Admiralty announcements of the 13th inst. :—

Flight Commander E. R. C. Nanson, to "President," for special service. Dec. 10th.

The undermentioned Temporary Probationary Flight Sub-Lieutenants have been confirmed in rank, with original seniority, and all re-appointed to "President," additional, for R.N.A.S., to date as follows : F. E. P. Barrington, H. V. Reid, I. N. C. Clarke, H. L. Francis, F. D. H. Bremner, J. H. D. M. Campbell, R. R. Soar, R. J. O. Compston, S. A. Black, J. Robinson, D. Whittier, A. B. Shearer, and C. G. J. Moir, all Nov. 23rd; J. E. Miniñe, Nov. 24th; L. E. Smith, Nov. 25th; H. E. Crawford, B. R. Lee, E. Potter, G. K. Williams, G. R. S. Fleming, M. J. M. Bryan, H. V. Worrall, and N. C. Blanch, all Nov. 26th; E. L. Pralle, Nov. 27th; S. M. Kinkead, J. S. Bolas, and K. V. Hooper, all Dec. 1st.

W. E. McConnell, entered as Probationary Flight Sub-Lieutenant, for temporary service, with seniority of Dec. 10th, and appointed to "President," additional, for R.N.A.S.

The following appeared among the Admiralty announcements of the 14th inst. :—

J. P. A. Waller granted a temporary commission as Lieutenant, R.N.V.R., with seniority Dec. 13th, and appointed to "President," additional, for R.N.A.S.

## Royal Flying Corps (Military Wing).

THE following appeared in a supplement to the London Gazette issued on the 8th inst. :—

*Squadron-Commanders.*—Major Alan D. Carden R.E., from a Deputy Assistant Director at the War Office; Nov. 25th, 1915, but with seniority as from Oct. 30th, 1914. Capt. Lionel W. B. Rees, R.A., from a Flight Commander, and to be Temporary Major whilst so employed; Nov. 28th, 1915.

*Wing-Adjutant, and to be Temporary Captain whilst so employed.*—Temporary Second Lieut. F. A. Forde, Reserve Regt. of Cavalry, and to be transferred to the General List, vice Capt. H. S. Walker, Cheshire Regt. Nov. 22nd, 1915.

*Supplementary to Regular Corps.*—The appointment of Donald C. MacLachlan as Second Lieutenant, notified in the Gazette of April 17th, 1915, is cancelled. Second Lieutenants (on probation) confirmed in their rank: Percival R. Burchall, Charles G. Heitherington,

Kenneth D. G. Collier, James G. Bulger, G. O. Hayne, William Boag. To be Second Lieutenants (on probation): Fred H. Songhurst; Oct. 27th, 1915. Nov. 8th, 1915: William D. L. Jupp, Harold R. Lecomber. George McKerrrow; Nov. 9th, 1915. Nov. 10th, 1915: Stanley Davenport, Charles G. Coe. Gerald Jacques; Nov. 10th, 1915. Sewel Allenby; Nov. 22nd, 1915. Henry R. Spence; Dec. 1st, 1915.

The following appeared in a supplement to the London Gazette issued on the 9th inst. :—

Second Lieut. (on probation) Darrell B. James is confirmed in his rank.

To be Second Lieutenants (on probation): Charles F. J. North; Nov. 8th, 1915. Edwin N. Layton and John N. D. Heenan; Nov. 15th, 1915.

The following appeared in the London Gazette of the 10th inst. :—

*Equipment Officers from Assistant Equipment Officers.*—Capt. C. H. Rowe, R. of O.; Nov. 11th. Capt. F. L. Scholte, S.R.; Nov. 21st. Lieut. (Temporary Capt.) Hon. E. A. Stonor, S.R.; Nov. 25th.

*Balloon Officers.*—Second Lieut. A. Burbury, Yorks, and seconded; Oct. 1st. Second Lieut. E. L. B. Buchanan, R.F.A., S.R.; Oct. 21st. Oct. 27th: Lieut. V. A. Beaufort Devons, and seconded; Temporary Lieut. A. H. Parker, General List; Second Lieut. D. B. James, S.R. Temporary Second Lieut. W. E. Hicks-Ussher, Suffolk, and transferred to General List; Nov. 4th. Capt. R. L. S. Raffles, R. Welsh F., S.R., and seconded; Nov. 5th.

*Assistant Equipment Officers.*—Second Lieut. G. D. Etches, S.R.; Oct. 4th. Second Lieut. R. P. J. M'Coy, S.R.; Oct. 14th. Oct. 18th: Lieut. N. Turner, S.R.; Second Lieut. M. Hodge, S.R.; Second Lieut. T. G. Clarson, S.R. Oct. 21st: Lieut. G. E. W. Broade, R.E., S.R.; Second Lieut. G. G. Lever, R.F., S.R., and seconded. Temporary Lieut. A. R. Earle, General List; Oct. 23rd. Second Lieut. F. St. J. F. N. Echlin, R.F., S.R., and seconded; Oct. 27th. Second Lieut. E. Bush, S.R.; Oct. 31st. Second Lieut. S. Ransom, S.R.; Nov. 1st. Lieut. S. A. Currin, S.R.; Nov. 2nd. Second Lieut. F. C. V. Laws, Lincs.; Nov. 7th. Temporary Second Lieut. G. K. Simpson, R.A., and transferred to General List; Nov. 8th. Second Lieut. W. Boag, S.R.; Nov. 16th. Temporary Second Lieut. G. H. Padley, Lincs., and transferred to General List; Nov. 17th. Nov. 21st: Second Lieut. J. L. P. Armstrong, A.S.C., T.F.; Temporary Second Lieut. M. G. Milsom, R.F., and transferred to General List; Second Lieut. P. R. Burchall, S.R.; Second Lieut. C. G. Hetherington, S.R.; Second Lieut. K. D. G. Collier, S.R. Second Lieut. J. G. Bulger, S.R.; Nov. 24th. Temporary Lieut. E. M. Bettington, R.A., and transferred to General List; Nov. 25th. Appointment of Temporary Second Lieut. N. L. Robertson, General List, in Gazette of Nov. 15th, cancelled.

*Supplementary to Regular Corps.*—Second Lieut. (on probation) T. Guy Clarson confirmed in rank. To be Second Lieutenants (on probation): E. W. Havers; Oct. 19th. Nov. 15th: C. Hirtzel, R. K. C. Maguire.

The following appeared in a supplement to the London Gazette issued on the 11th inst. :—

*Flight-Commander.*—Capt. Richard E. Orton, East Lancashire Regt., from a Flying Officer. Dec. 1st, 1915.

*Flying Officers.*—Temporary Capt. R. Burdon, Durham L.I., and to be transferred to the General List; Nov. 19th, 1915. Nov. 23rd, 1915: Temporary Second Lieut. G. B. Hodgson, R.A., and to be transferred to the General List; Temporary Second Lieut. H. C. Smith, Manchester Regt., and to be transferred to the General List; Lieut. R. E. Cuff, Loyal North Lancashire Regt., Special Reserve, and to be seconded. Nov. 25th, 1915: Temporary Lieut. G. W. T. Garrood, Royal Warwickshire Regt.; Second Lieut. R. L. H. Laye, Gordon Highlanders, and to be seconded; Temporary Second Lieut. D. G. Liddle, Buffs (East Kent Regt.), and to be transferred to the General List; Temporary Second Lieut. W. J. Y. Guilfoyle, R.A., and to be transferred to the General List; Temporary Second Lieut. E. J. Tyson, General List. Nov. 27th,



1915: Second Lieut. F. G. Hogarth, Special Reserve; Second Lieut. G. G. Samuel, Special Reserve.

*Memoranda.*—To be Temporary Second Lieutenant: Sergt. Wilfred Watts, from Royal Flying Corps. Nov. 13th, 1915.

*Supplementary to Regular Corps.*—Lieutenants to be Captains: The Hon. M. Baring; Oct. 25th, 1915. Alexander G. Clark; Nov. 23rd, 1915. (Temporary Capt.) the Hon. Edward A. Stonor; Nov. 25th, 1915.

Second Lieutenants (on probation) confirmed in their rank: Francis G. Hogarth, Gerald G. Samuel.

Arthur T. Harris to be Second Lieutenant (on probation); Nov. 6th, 1915.

The following appeared in a supplement to the *London Gazette* issued on the 13th inst. :—

*Flying Officers.*—Oct. 21st, 1915: Lieut. A. G. R. Garrod, Leicestershire Regt., Special Reserve, and to be seconded; Temporary Capt. E. C. Perrin, Cheshire Regt. (T.F.). Nov. 11th, 1915: Lieut. C. G. Burge, York and Lancaster Regt.; Temporary Second Lieut. W. H. Hargreaves, Duke of Cambridge's Own (Middlesex Regt.), and to be transferred to the General List; Temporary Second Lieut. J. McArthur, Princess Charlotte of Wales's (Royal Berkshire Regt.), and to be transferred to the General List. Nov. 22nd, 1915: Second Lieut. A. W. Davies, R.A., and to be seconded; Lieut. H. B. Davey, Prince of Wales's (North Staffordshire Regt.) (T.F.); Temporary Second Lieut. B. C. Rice, General List; Temporary Second Lieut. R. Chadwick, General List; Lieut. H. Clements-Finnerty, 17th (Duke of Cambridge's Own) Lancers, and to be seconded; Temporary Second Lieut. C. T. Cleaver, General List; Temporary Second Lieut. C. F. Portal, Motor-Cyclist Section, R.E., Special Reserve; Lieut. C. G. Beatson, Duke of Cambridge's Own (Middlesex Regt.), Special Reserve, and to be seconded; Temporary Lieut. G. S. Inglis, Connaught Rangers, and to be transferred to the General List; Second Lieut. T. Henderson, Tyne Electrical Engineers, R.E. (T.F.); Second Lieut. R. Corbett, West Somerset Yeomanry (T.F.); Temporary Second Lieut. A. M. Vaucour, R.A., and to be transferred to the General List; Temporary Second Lieut. R. F. Wills, General List; Second Lieut. K. B. Lloyd, Royal Welsh Fusiliers, and to be seconded; Temporary Second Lieut. H. C. Evans, General List; Temporary Second Lieut. H. E. Fletcher, General List; Second Lieut. J. E. Catherall, Royal Warwickshire Regt., and to be seconded; Second Lieut. F. R. Hardie, 3rd (King's Own) Hussars, and to be seconded; Second Lieut. L. A. K. Butt, South Staffordshire Regt., and to be seconded; Second Lieut. P. Anderson, Princess Louise's (Argyll and Sutherland Highlanders), and to be seconded; Temporary Lieut. M. Jacks, London Regt. (T.F.); Second Lieut. R. Whitaker, Rifle Brigade (Prince Consort's Own), and to be seconded; Temporary Second Lieut. T. McK. Hughes, King's R.R.C.; Lieut. L. W. W. Lees, Antrim R.G.A., Special Reserve, and to be seconded; Lieut. J. S. B. MacPherson, Canadian Artillery; Temporary Second Lieut. K. A.



## Rewards for R.N.A.S. Officers.

It was announced by the Admiralty on December 8th that His Majesty the King has been graciously pleased to give orders for the appointment of the following officers to the Distinguished Service Order, in recognition of their services, as mentioned, on the occasion of the operations against the "Königsberg":—

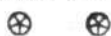
Squadron-Commander ROBERT GORDON, R.N.A.S. (Captain, Temporary Major, R.M.).

Was in command of the Air Squadron. Was indefatigable in his work, and ran great risks in spotting and reconnoitring.

Flight-Commander JOHN TULLOCH CULL, R.N.A.S. (Lieutenant, R.N.).

Flight Sub-Lieutenant HARWOOD JAMES ARNOLD, R.N.A.S.

Flight Commander Cull and Flight Sub-Lieutenant Arnold were spotting on July 11th, under fire, in a biplane, when the enemy's fire damaged it so that it descended in a quarter of an



## London's Anti-Aircraft Defences.

IN the House of Commons, on the 13th inst., replying to a question put by Mr. King, as to whether any decision had been come to regarding the transference of the Anti-Aircraft (London) Corps to the control of the War Office, Mr. Tennant, Under-Secretary

Creery, General List; Temporary Lieut. J. C. Russell, R.E.; Temporary Second Lieut. G. W. M. Green, Army Cyclist Corps; Temporary Lieut. C. Porri, Lincolnshire Regt., and to be transferred to the General List; Lieut. H. French, Prince of Wales's Own (West Yorkshire Regt.), Special Reserve, and to be seconded; Temporary Second Lieut. H. J. Payn, Motor-Cyclist Section, R.E., Special Reserve; Lieut. M. W. Thomas, R.A., and to be seconded; Capt. A. V. Holt, Black Watch (Royal Highlanders), and to be seconded; Lieut. A. McR. Moffat, Princess Louise's (Argyll and Sutherland Highlanders) (T.F.); Temporary Lieut. O. I. Preston, Sherwood Foresters (Nottinghamshire and Derbyshire Regt.), (T.F.); Lieut. C. C. Haynes, Devonshire Regt., and to be seconded; Temporary Second Lieut. S. T. Welsh, General List; Temporary Second Lieut. G. A. F. Layton, General List; Second Lieut. A. D. Bell-Irving, the Gordon Highlanders, Special Reserve, and to be seconded; Lieut. J. H. C. Minchin, Cameronians (Scottish Rifles), and to be seconded; Second Lieut. A. H. Bottrell, Royal Warwickshire Regt., and to be seconded; Temporary Second Lieut. K. F. Balmain, Royal Scots (Lothian Regt.), and to be transferred to the General List; Temporary Second Lieut. C. C. Russell, the Buffs (East Kent Regt.), and to be transferred to the General List; Temporary Second Lieut. T. K. G. Ridley, Alexandra, Princess of Wales's Own (Yorkshire Regt.), and to be transferred to the General List; Temporary Second Lieut. A. L. Findlay, Seaforth Highlanders (Ross-shire Buffs, Duke of Albany's), and to be transferred to the General List; Temporary Second Lieut. A. Murray, Gordon Highlanders, and to be transferred to the General List; Temporary Second Lieut. A. J. Insall, General List; Temporary Second Lieut. L. C. Drenon, Norfolk Regt., and to be transferred to the General List.

*Memoranda.*—Corpl. R. Chadwick, from R.E., to be Temporary Second Lieutenant, for duty with the Royal Flying Corps. Aug. 17th, 1915.

*Supplementary to Regular Corps.*—To be Second Lieutenants (on probation): George C. Mills; Nov. 5th, 1915. Robert T. Lattey; Dec. 3rd, 1915. Samuel Turner; Dec. 6th, 1915.

The following appeared in the *London Gazette* of the 14th inst. :—

*Flying Officers.*—Nov. 18th: Capt. C. Mackay, Leinster, S.R., and seconded; Lieut. J. Prestwich, A.S.C. (T.F.); Temporary Second Lieut. K. R. Binning, Manchester, and transferred to General List; Second Lieut. R. H. G. Neville, D.C.L.I., and seconded; Second Lieut. J. Stuart, R. Inniskilling F., and seconded; Second Lieut. J. B. Walmsley, Unattached List for I.A.

## Central Flying School.

THE following appeared in a supplement to the *London Gazette* issued on the 8th inst. :—

*Instructor.*—Capt. (Temporary Major) Lionel W. B. Rees, R.A., a Squadron-Commander, Military Wing, vice Lieut. (Temporary Major) G. F. Pretyman, D.S.O., Prince Albert's Somerset L.I.; Nov. 26th, 1915.



hour from 3,200 ft. to 2,000 ft. During this time no attempt was made to return to Headquarters at Mafia, although it was obvious that this could not be done unless a start was made at once.

Flight Sub-Lieut. Arnold continued to send his spotting signals the whole time, and when a quarter of an hour later the machine was again hit and forced to descend, Flight Commander Cull controlled the machine, and Flight Sub-Lieut. Arnold continued to send spotting corrections to the last, after warning the monitors that they were coming down, and would endeavour to land near them.

The aeroplane finally came down in the river, turning over and over. Flight Commander Cull was nearly drowned, but was assisted by Flight Sub-Lieutenant Arnold, and both were rescued by a boat from the "Mersey."

It was also announced that the following Air-Mechanic had been awarded the Distinguished Service Medal for services on the same occasion :—

Air-Mechanic EBENEZER HARRY ALEXANDER BOGGIS.



of State for War, stated that, although there are certain details in connection with this matter which still require settlement, the defences of London are being transferred to the control of the War Department.

In reply to a supplementary question, Mr. Tennant said that Sir Percy Scott would no longer be in charge of the air defences of London.

## THE SHAW FLYING BOAT.

Quick rising from the water, speed, and seaworthiness are the three primary considerations aimed at by the designer of the Shaw flying boat, and at the same time the comfort and protection of the pilot and passenger,

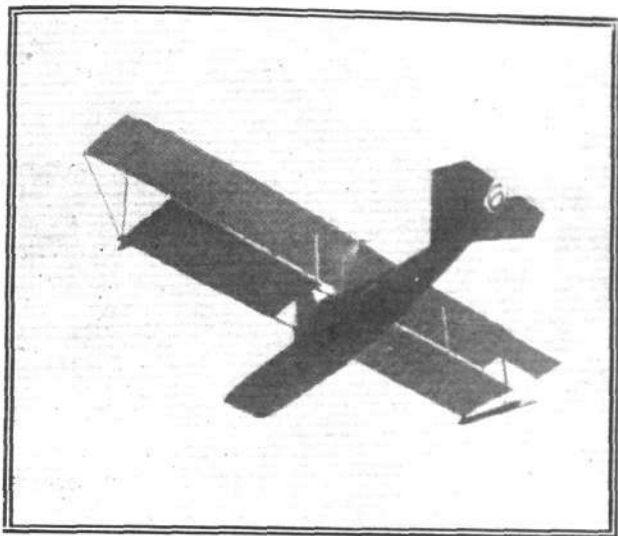


Fig. 1.—View of the first model Shaw flying boat in flight.

and the general stability of the machine in the air, have not been sacrificed to attain this end. From the accompanying scale drawings it will be seen that the Shaw flying boat is unique in several respects. The hull, for instance, is very short, and follows motor boat, or hydroplane, practice to a much greater extent than in most other flying boats. Another feature is that the engine is placed in the hull forward of the main planes and the pilot and passenger, and drives the propeller mounted at the rear of the planes through a shaft and chain. The tail, also, is unusually short with a slight angle of incidence, being so designed to facilitate the "get off," and to eliminate tail drag in so doing. Although it is typically a "sporting" bus, the Shaw flying boat is also adaptable

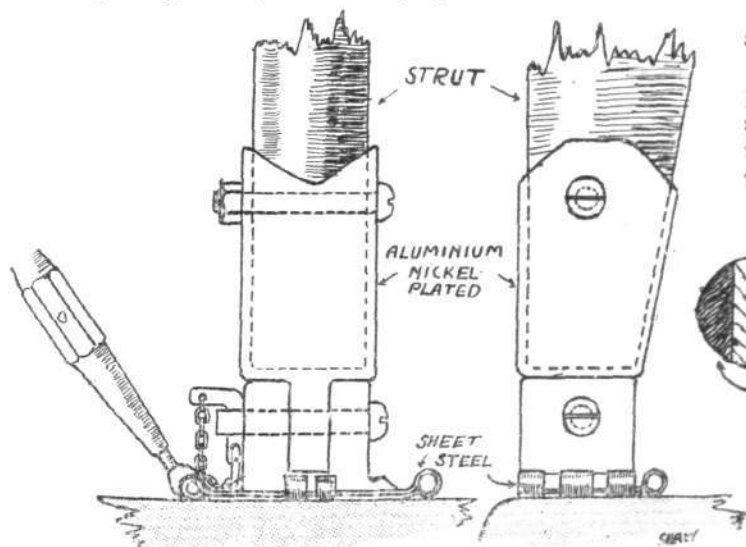


Fig. 3.—The Shaw Flying Boat.—The interplane strut socket and section of strut.

to naval or military requirements, for, in addition to the foregoing features, provision is made for mounting a gun in front of the foremost cock-pit.

The main planes are of the double-surfaced laminated-

rib type, having a chord of 5 ft. 6 ins., and a span of 42 ft. 4 ins. and 34 ft. 4 ins. top and bottom respectively. The front spar, which forms the leading edge, is built up of three laminations of spruce, ash and spruce, laid one on the top of the other as shown in Fig. 2. The ribs are also laminated in a similar manner with five laminations, the central member being of ash and the others of spruce. All the ribs are spaced 1 ft. apart. The top plane is in three sections, a central panel 6 ft. span to which the outer sections are attached, while the lower plane is in two sections with open spaces of about 16 ins. width on either side of the boat.

Irish linen doped with Emaillite is used for covering the planes. Top and bottom planes are separated 5 ft. 6 ins. apart by six pairs of struts. These are of streamline section, measuring 3 ins. by 1½ ins., and are built up of five laminations of spruce and ash, as shown in Fig. 3. They are attached to the planes by special quick-detachable sockets made of malleable aluminium

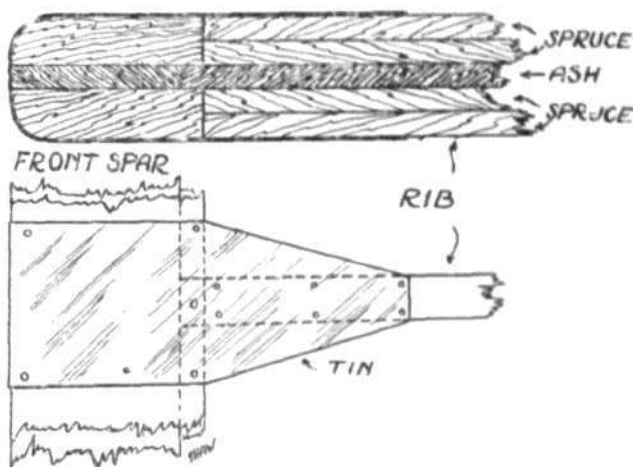
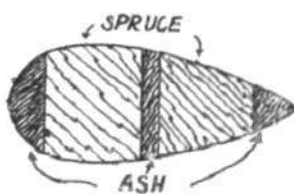


Fig. 2.—The Shaw Flying Boat.—The construction of the front spar and ribs.

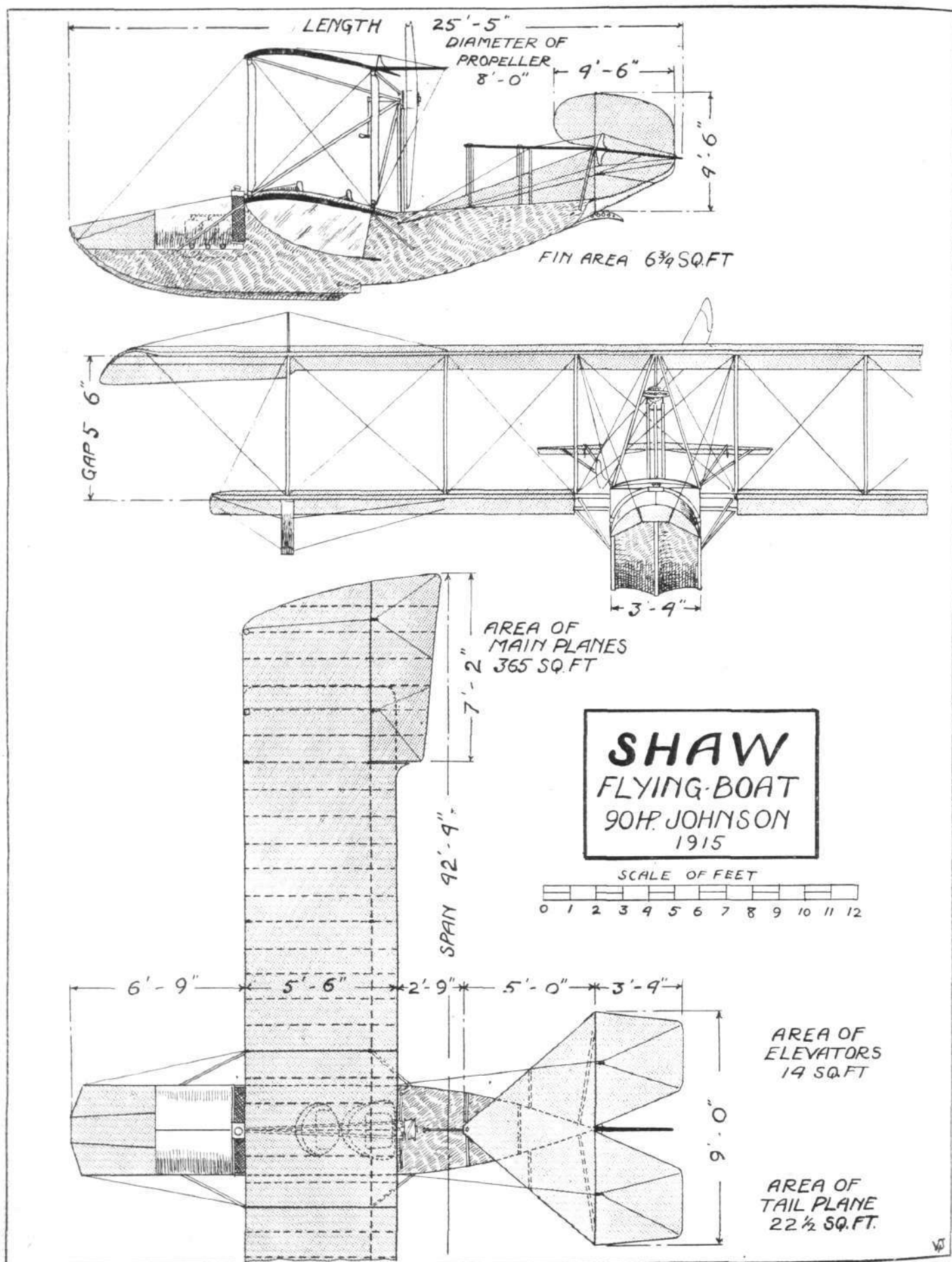
nickel plated. Two balancing flaps, 7 ft. 2 ins. by 2 ft. 8 ins., are hinged to the rear spar of the top plane, and are interconnected.

The tail is located only a short distance from the main planes, and consists of a horizontal triangular stabilising surface with two elevators hinged thereto, a vertical triangular fin, and a partly balanced rudder hinged to the stern of the boat and the vertical fin. The horizontal surface, which is in two sections, is set at a slight lifting angle, and is strongly mounted above the stern of the boat by tubular supports. The fin is similarly supported underneath.



The propeller, an 8 feet diameter Shaw, is mounted high up behind the main planes by an arrangement of tubular struts. It is driven, by a single chain, off the shaft from the engine, a 90 h.p. Johnson two-stroke, which is mounted in the forward portion of the boat.

Measuring 20 ft. long, the boat is of the single step type, the bottom, from the step to the nose, being of V form and curving upwards. Aft of the step the boat also curves slightly upwards and tapers to a point. The



THE SHAW FLYING BOAT.—Plan, side, and front elevation to scale.



hull is built up of two-ply mahogany and canvas, copper riveted, over a framework of ash longitudinals and spruce ribs (Fig. 4). It is divided into some six bulkheads, and the nose is neatly streamlined by a canvas hood at the extreme bows and by a sheet steel bonnet over the engine.

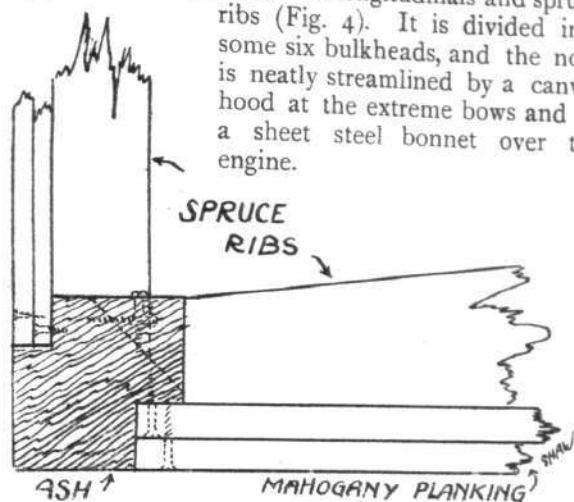
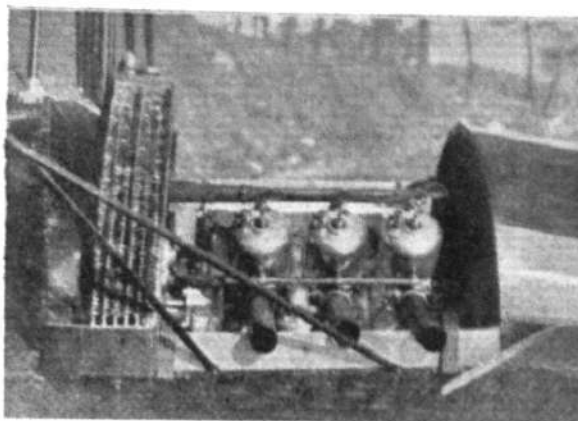


Fig. 4.—The Shaw Flying Boat.—Method of building up the hull.

At the rear of the engine bonnet is the radiator, which is made to fit flush with the former. Behind the

engine compartment are the passenger's and pilot's cockpits, each having a small cowl or dash in front as a



The 90 h.p. Johnson 2-stroke engine, in its cockpit, of the Shaw flying boat.

protection from wind and spray. A Deperdussin type of control is provided for both pilot and passengers.



It cannot by any stretch of the imagination be said that the last week-end at Hendon was a pleasant one, for in the first place Saturday morning saw a regrettable accident to a Service Machine which resulted in the death of a passenger, Flight Sub-Lieut. Geo. A. Armitage, and secondly the weather, at its best by no means favourable for flying, got worse and worse as the day grew older.

It is not surprising, therefore, that only one flight, but a fine one nevertheless, on Saturday afternoon has to be recorded. This was put up by J. H. Moore on his 55 h.p. Caudron-type biplane. He went up with the intention of improving upon his altitude flight of 8,500 ft. the Wednesday previous. It was not long before he found the breeze was pretty stiff, so keeping head to the wind he climbed steadily for several minutes only to find that he was hovering

over the same spot. He then, as he got higher, began to drift backwards until he was well to leeward of the aerodrome, so he thought it better to give up any idea of ascending further—he was about 6,000 ft.—and to make tracks for the aerodrome right away. This took him well over half an hour, and it was not until he got to about 1,000 ft. that he could make any decent forward progress and get back into the aerodrome. It was a really good flight, lasting about an hour and twenty minutes, and more than made up for the absence of other pilots.

Sunday was another bad day, being very cold and windy, and I, like many others, preferred to stay by my own fireside that afternoon, so did not see the numerous flights that did not take place. However, I understand that M. Osipenko put in some extra practice on one of the 60 h.p. G.-W. 'buses.

#### Flying Officers Decorated.

It was announced in the Court Circular, dated Buckingham Palace, December 9th, that the following officer had the honour of being received by the King, when His Majesty invested him with the insignia of Companion of the Distinguished Service Order: Captain G. A. K. Lawrence, Royal Flying Corps.

It was also announced that the following had the honour of being received by His Majesty, when the King decorated them with the Military Cross:—

Captain C. E. C. Rabagliati, Captain E. W. Wilson, Captain R. M. Vaughan, Captain L. A. Strange, and Lieutenant C. E. H. James, all of the Royal Flying Corps.

#### Derelict German Seaplanes.

THE *Daily Mail* correspondent at Copenhagen reported the following on December 10th:—A wrecked German waterplane marked "Reschki, Brandenburg, 1914," was to-day washed ashore at Thisted (on the North Sea coast of Jutland). The airmen had apparently been drowned. The wings of the waterplane were crushed together over the back of the machine, and the collapse of the wings was evidently the cause of her loss. The machine was one of the most up-to-date types. It was equipped with wireless, photographic apparatus, and guns.

An Exchange message from Copenhagen on December 14th stated: Wreckage from a German aeroplane has been found on the shore north of Shaërbek, in Schleswig.

# The Royal Aero Club of the United Kingdom

OFFICIAL NOTICES TO MEMBERS

## Aviators' Certificates.

The following Aviators' Certificates have been granted :—

- 2128 Flight Sub-Lieut. Gerald Morton Morse, R.N.A.S. (Maurice Farman Biplane, Royal Naval Flying School, Eastchurch). Oct. 14th, 1915.
- 2129 Flight Sub-Lieut. James Sydney Bolas, R.N.A.S. (Grahame-White Biplane, Royal Naval Air Station, Eastbourne). Oct. 15th, 1915.
- 2130 Flight Sub-Lieut. George Henry Bittles, R.N.A.S. (Maurice Farman Biplane, Central Flying School, Upavon). Nov. 11th, 1915.
- 2131 Flight Sub-Lieut. Llewellyn Edwards, R.N.A.S. (Grahame-White Biplane, Royal Naval Air Station, Eastbourne). Nov. 15th, 1915.
- 2132 Flight Lieut. Alexander Keiller, R.N.A.S. (Avro Biplane, Royal Naval Air Station, Chingford). Nov. 27th, 1915.
- 2133 1st Class Air Mechanic Henry Montague Franklin, R.F.C. (Maurice Farman Biplane, Military School, Brooklands). Dec. 5th, 1915.
- 2134 Lieut. George Harry Walker (10th Cheshire Regt.) (Maurice Farman Biplane, Military School, Shoreham). Dec. 5th, 1915.
- 2135 Flight Sub-Lieut. Francis Arthur Rivers Malet, R.N.A.S. (Grahame-White Biplane, Grahame-White School, Hendon). Dec. 8th, 1915.
- 2136 Flight Sub-Lieut. Gerald Arthur Maclean, R.N.A.S. (Maurice Farman Biplane, Royal Naval Air Station, Eastbourne). Nov. 17th, 1915.
- 2137 Geoffrey Alec Shield Nicholson (Caudron Biplane, Beatty School, Hendon). Nov. 27th, 1915.
- 2138 David Williamson Stewart Paterson (Maurice Farman Biplane, Military School, Brooklands). Dec. 8th, 1915.
- 2139 Flight Sub-Lieut. Howard John Thomas Saint, R.N.A.S. (Grahame-White Biplane, Grahame-White School, Hendon). Dec. 9th, 1915.
- 2140 Willy Omer François Jean Coppens Gheude (Belgian Subject) (Caudron Biplane, Ruffy-Baumann School, Hendon). Dec. 9th, 1915.
- 2141 Flight Sub-Lieut. Cyril Gradwick Knight, R.N.A.S. (Grahame-White Biplane, Royal Naval Air Station, Chingford). Dec. 9th, 1915.
- 2142 Flight Sub-Lieut. Aidan Arnold Wallis, R.N.A.S. (Grahame-White Biplane, Royal Naval Air Station, Chingford). Dec. 9th, 1915.
- 2143 Capt. Henry Stewart Walker (Cheshire Regt.) (Maurice Farman Biplane, Military School, Birmingham). Dec. 9th, 1915.
- 2144 James Millar Kirkwood (Caudron Biplane, Beatty School, Hendon). Dec. 11th, 1915.
- 2145 2nd Lieut. Edward Dawson Atkinson (40th Pathans) (L. and P. Biplane, London and Provincial School, Hendon). Dec. 12th, 1915.

## AMERICAN CERTIFICATES.

- 361 Arthur Roy Brown (Wright Biplane, Wright School, Dayton, Ohio). Nov. 13th, 1915.
- 362 Lieut. Harley G. Smith (Wright Biplane, Wright School, Dayton, Ohio). Nov. 17th, 1915.

## Aeronaut's Certificate.

The following Aeronaut's certificate has been granted :—

- 56 Flight Sub-Lieut. Gray Campbell Conning Kilburn, R.N.A.S. Dec. 13th, 1915.

## Christmas Holidays.

The Club will be closed from 7 p.m. on Friday, the 24th inst., till 9 a.m. on Monday, the 27th inst.

## The Servants' Christmas Fund.

The subscription list for this fund is now open.

## Extension of the Hours of Opening the Club.

The Club is now open from 9 a.m. to 10.30 p.m. each day, including Sunday.

## New Members.

Members are reminded that, according to the Rules, the Annual Subscription of any New Member they may propose, who is elected between November 1st and December 31st of this year, will cover the period up to December 31st, 1916.

## THE FLYING SERVICES FUND

administered by

## THE ROYAL AERO CLUB.

THE Flying Services Fund has been instituted by the Royal Aero Club for the benefit of officers and men of the Royal Naval Air Service and the Royal Flying Corps who are incapacitated on active service, and for the widows and dependants of those who are killed.

The Fund is intended for the benefit of all ranks, but especially for petty officers, non-commissioned officers and men.

Forms of application for assistance can be obtained from the Royal Aero Club, 166, Piccadilly, London, W.

## Subscriptions.

	£	s.	d.
Total subscriptions received to Dec. 8th, 1915 ...	10,097	12	7
M. E. Y. ... ..	2	2	0

Total, December 15th, 1915 ... 10,099 14 7

166, Piccadilly, W. B. STEVENSON, Assistant Secretary.

## THE DESTRUCTION OF THE "KÖNIGSBERG."

THE following extracts from the despatch dated July 15th, 1915, of Vice-Admiral H. King Hall, describing the destruction of the German cruiser "Königsberg" detail the work of the Royal Naval Air Service :—

"At 5.25 a.m. an aeroplane with Flight-Commander Harold E. M. Watkins as pilot, and carrying six bombs, left the aerodrome on Mafia Island. The bombs were dropped at the 'Königsberg' with the intention of hampering any interference she might attempt with the monitors while they were getting into position.

"At 5.40 a.m. another aeroplane, with Flight-Commander John T. Cull as pilot, and Flight Sub-Lieutenant Harwood J. Arnold as observer, left the aerodrome for the purpose of spotting for the monitors.

"After anchoring, the 'Weymouth' did what was possible to assist the monitors by bombarding at long range a position at Pemba, where a spotting and observation station was supposed to be, and by keeping down the enemy's fire at the aeroplanes. This was done very effectively.

"... fire was opened, as before stated, at 6.30 a.m., but as the 'Königsberg' was out of sight it was very difficult to obtain

satisfactory results, and the difficulties of the observers in the aeroplanes in marking the fall of the shots which fell amongst the trees were very great, and made systematic shooting most difficult.

"There being only two aeroplanes available, considerable intervals elapsed between the departure of one and the arrival of its relief from the aerodrome thirty miles distant, and this resulted in a loss of shooting efficiency.

"At 12.35 one of the aeroplanes broke down, and at 3.50 the second one also.

"As it was necessary to make a fresh attack on the 'Königsberg' to complete her destruction, further operations were carried out on July 11th, by which date the aeroplanes were again ready for service, and the monitors had made good certain defects and completed with coal.

"The observers in the aeroplanes, by their excellent spotting, soon got the guns on the target, and hit after hit was rapidly signalled. At 12.50 it was reported that the 'Königsberg' was on fire.

In our last issue we gave in full the supplement to Admiral King Hall's despatch dealing with the work of the flying officers, and the awards are given on p. 984.



# AEROPLANE TESTING AND "STUNT" FLYING.

By SYDNEY PICKLES.

WHEN the late M. Pegoud first demonstrated to a wondering world the possibility of "looping the loop" and upside-down flying, opinions were at once divided as to the value of these performances. Some simply dismissed them with a shrug of the shoulders as "circus performances," while others hailed them as "scientific experiments" of the greatest importance. When, a little while later, Pegoud had numerous imitators, not only in France but all over the world, opinions still remained divided, although the "circus" party probably became, and for that matter still is, I think, the stronger of the two. As to who is right and who is wrong, it has always seemed to me that both views may be justified; it all depends on the nature and object of the "stunts." Obviously the man who goes on tour from place to place and does all sorts of weird acrobatics in the air simply with a view to attract a large "gate" is, up to a point, in the category of a circus performer. But even granting that he can be so classed, his work is useful to the cause of aviation in that it helps to spread the interest to people who require strong measures to convince them of the possibilities of flying, people who would be left unconvinced by ordinary straightforward piloting, saying: "Yes, that is all very well, but suppose the machine gets caught in a squall and is upset, then what happens?" Besides, "stunt" flying has undoubtedly helped enormously towards giving pilots confidence in their machines by demonstrating that no matter what position it may get into accidentally it will always be possible to bring it out, always provided, of course, that a sufficiently safe altitude is maintained.

It has always seemed to me, however, that there is another respect in which "stunt" flying is not only justified but invaluable, and therefore, when watching a pilot, who is apparently "throwing his machine about" in the most reckless manner, one should not be too quick in jumping to conclusions, and put him down at once as an aerial acrobat. I am referring to the testing of new machines. Invariably when a new 'bus is seen at an aerodrome for the first time a little band of critics, who are not always over-burdened with aeronautical knowledge, gather round, and after a brief—usually very brief—examination of the machine the poor 'bus is pronounced either "spirally unstable" or having a factor of safety of about 0.5. This opinion is freely communicated to others who either have not had a chance to see for themselves or else are unable to judge and therefore blindly accept the criticism, and attach to it an importance far greater than the qualifications of the self-constituted critics warrant. Then dame rumour gets to work, and, as is her wont, improves matters to accord with her particular object at the moment. By the time those who really count get to hear of the maligned machine, a wall of prejudice has been built up, which it may take the unlucky manufacturer months of consistent hard work in the way of daily demonstrations to break down.

Here is where the value of "stunt" flying by the pilot, whose job it is to test the machine, comes in. By demonstrating to all who have got eyes to see that so-and-so's 'bus is *not* spirally unstable and does *not* suffer from a factor of safety of 0.5, he checks the rumours before they have time to get up flying speed and thus saves the manufacturer from a great deal of annoyance, and, in many cases, a not inconsiderable amount of good hard

cash. When a constructor does not wish his machine to be put through a series of "stunts," the pilot should, it goes without saying, refrain from so doing. On the other hand, if the pilot is convinced in his own mind that the 'bus is strong enough to make "stunting" safe from the point of view of construction, he should not wait for the manufacturer to ask him to do it, since this is rather a heavy responsibility for the maker to have on his shoulders, but rather approach him on the subject; then, having obtained permission, if anything does go wrong, the pilot is himself responsible, having suggested the "stunts."

It should be pointed out that I do not by any means advocate loops, spirals, tail slides and *chutes de cote* the first time out on a new machine. Far from it. Personally I always go very carefully to work, and never do anything in the way of tricks without a very good reason. A pilot should go to work carefully on a new machine, and proceed by easy stages from straightforward flying to the performances putting exceptional strains on the 'bus. Perhaps a few words regarding the procedure I myself follow would be of service to other pilots who are engaged on testing out new machines.

Before ever attempting to take up a new 'bus I go over it very carefully, examining the construction in every detail, and satisfying myself that it is thoroughly sound from an engineering point of view. Wherever possible it is not a bad idea to follow the construction of a machine in the works from the time the planks are cut and the fittings put in hand until the finished article is wheeled out on to the aerodrome. It gives one confidence.

Having satisfied myself that the 'bus is all right structurally I take her out for a straight flight. The moment she is off the ground you can tell whether or not she is balanced fore and aft. If there is any weakness in this direction a slight alteration to the angle of incidence of the tail plane will usually put matters right unless she is very far "out." The next thing to try is a banked turn, wide and not very steeply banked at first, to test the lateral balance and *aileron* and rudder controls. Going to a greater altitude the turns are made shorter and the banks steeper to see whether the 'bus will come off the bank readily. Usually I also try fairly sharp turns without banking so as to find out whether the machine has any tendency to "spin." If she has, the un-banked turn will become shorter and shorter. If, on the other hand, she has a certain amount of weathercock stability she will gradually come off the turn and leave it at a tangent.

Having determined the absence of any tendency to "spin" I gradually increase the banks until they are vertical or as nearly so as it is possible to get them, letting the 'bus side slip. Owing to the weathercock stability the tail will go up during a side slip, turning it into a nose dive from which one recovers, of course, by using the elevator. This process of flattening out after a dive should be very gentle as owing to the extra speed attained during the dive a sudden "flattening out" increases the load enormously. As a matter of fact I had the uncomfortable experience once, on a well-known make of monoplane, when being in too great a hurry to get out of a dive, to see my top bracing wires go quite slack, while the lift wires were strained almost to breaking point. This need not, of course, necessarily mean that



there was any immediate danger of breakage since the bracing cables might have been left rather slack when the 'bus was turned up, but it is never particularly comforting to see a stay wire dangling about.

Having ascertained that the machine answers her controls perfectly, the next step is to take her to a safe altitude and try a loop. Here I should like to mention that I am a great believer in air speed indicators, which I have found to be most reliable for straightforward flying, and absolutely invaluable under certain circumstances. For instance, in getting out of a small field with obstacles round it, such as trees, &c., it is of the greatest importance to know the speed as registered by the indicator, which gives the maximum climb. For looping, however, I have noticed that the indicator is not always to be trusted implicitly, at any rate when doing more than one loop. This is due to a certain sluggishness in the transmission of the difference in pressure from the Pitot tube to the indicator, or a lag in the instrument itself. Another thing which may tend to make the movements of the indicator needle somewhat erratic is that in most installations there are usually a fair number of rubber connections which, if not properly looked after, may become cracked and cause leaks.

That this sluggishness exists was very forcibly brought home to me once during a flight. I had just made a rather steep dive during which the indicator needle only advanced slowly, but when I had flattened out and even commenced to climb a little so as to take some of

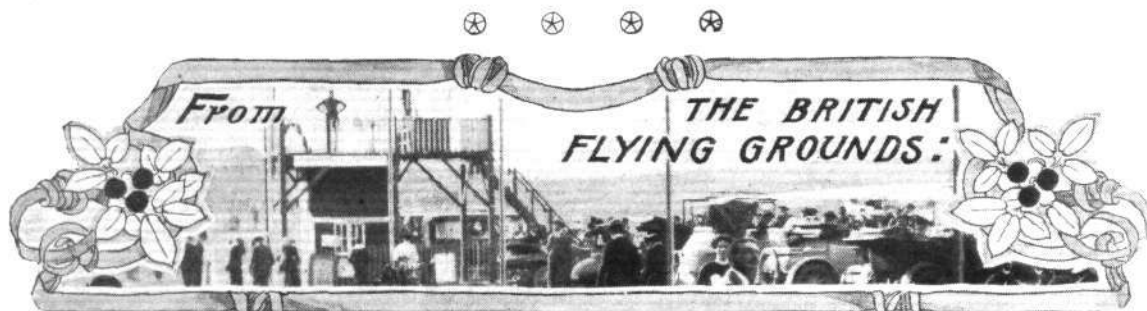
the speed off the 'bus, the indicator needle still kept accelerating upwards until it reached, or nearly so, the figure corresponding to the highest speed attained during the dive.

Apart from the pilot's feeling "fit" or otherwise, "stunt" flying is to a great extent determined by weather conditions. Here it should be realised that there are days when tricks which would be highly dangerous on other days are reasonably safe. Nothing is *absolutely* safe; even eating fish one might swallow a bone and choke. A short flight soon tells a pilot whether or not the air is to be trusted.

Obviously if the day is such that you get "drops" when least expecting them, you would not do any "stunting" at a low altitude.

I have encountered a good deal of criticism on account of my alleged "acrobatics" when testing machines, and hope that the present brief article may help to convince the critics that I do not indulge in these "stunts" simply for the love of the thing, although I must confess that I rather enjoy them, but that they are carried out with definite objects in view.

In conclusion, I wish to point out that a great deal depends on the type of machine one is flying. Given a small light machine and a large heavy machine, both theoretically possessing the same factor of safety, one can, in my opinion, take liberties on the small 'bus which it would be folly to attempt on the large one, owing to the difference in inertia stresses of the two.



## London Aerodrome, Collindale Avenue, Hendon.

**Grahame-White School (R.N.A.S.).**—Straights with instructor last week: Probationary Flight Sub-Lieut. Rockey. Landing practice: Probationary Flight Sub-Lieut. Ovens. *Brevets* taken by Probationary Flight Sub-Lieuts. Saint and Malet.

**Grahame-White Civilian School.**—Straights with instructor: Messrs. Lewis and Verguill. Eights with instructor: Mr. Yates. Eights and circuits alone: Messrs. Gammon and Phillippi. Instructors during week: Messrs. Manton, Pashley, Russell, and Winter.

Owing to unfavourable weather, further practice was not possible.

**Beatty School.**—The following pupils were out during last week:—Messrs. Baker, Barrow, Begg, Branford, Collett, Drysdale, Gayner, Godfrey, Hughes, Kirkwood, Martin, Owen, Podmore, Thompson, Halford-Thompson, Williams, Young, d'Allesina, Sellars, Aoyong, Wainwright, Baldwin, Byrne, Overton and Savill-Onley.

The instructors were Messrs. G. W. Beatty, W. Rochekelly, R. W. Kenworthy, G. Virgilio, A. E. Mitchell and L. L. King. The machines in use were Beatty-Wright dual control and single-seater propeller biplanes and Caudron tractor biplanes.

Certificates were taken during the week by Mr. Kirkwood and Lieut. Gayner, and three further pupils are awaiting favourable weather to go through their tests.

**Hall School.**—The following pupils were attending practice during last week:—With Cecil M. Hill: Dresser, Capt. Grey, Mann, Redford, Stirling, and Shum. With John Drew: Arnsby, Wooley, Ormerod, Millburn, Cosgrave, Chapman, Neal, Le Coq Moir, Lieut. Cooke, Collins, and Ridley. Machines in use: Hall and Caudron Government-type tractors.

The weather was as bad as it could well be for tuition work.

**London and Provincial Aviation Co.**—Pupils doing rolling last week: Messrs. Holcombe, Snow, Rimer, Scott, Van Roggen, Medaets, Egelstaff, Loomes, Hardy and Lees. Doing straights: Messrs. Hunt, Heyn, Martin, Wood, Medaets, Knowles and Thorp. Doing circuits: Messrs. Atkinson, Thorp, Burgess and Martin.

Instructors: Messrs. W. T. Warren, M. G. Smiles, C. Jacques, H. Sykes and W. T. Warren, jun.

Lieut. Atkinson took a very good Royal Aero Club certificate on Sunday.

**Ruffy-Baumann School.**—Pupils out last week with instructor: Hoskyn, Bolton, Humtiaux, Pauli, Cox, Yiule, Laidlow, Launoit, Cuthbertson and Dobson. Straights or rolling alone: Tomson, Cole and Griffith. Eights or circuits alone: Tomson.

Instructors: Ed. Baumann, F. Ruffy, A. Baumann and Winchester. Machines in use: 60 and 50 h.p. Caudron-type biplanes.



I KNOW nothing of the Child Study Society. Until I read of it in the *Times* of last Friday, I did not know that it existed. I should have thought, had I thought of it at all, that such a thing was unnecessary; having read of it, I am left wondering.

Dr. C. W. Kimmins is Chief Inspector of Schools for the London County Council, and he has lectured to the Child Study Society at the Royal Sanitary Institute upon the subject of "The Interest of London Children at different ages in Air Raids." When a doctor lectures to a society at an institute, ordinary people must be respectful, and so I simply wonder.

I can imagine that society formed of great ladies, needing to be lectured to on the study of children. Possibly they recognise their shortcomings as "fanciers" in the new hobby, in order to study which, they have perhaps given up stamp collecting, or the breeding of pedigree Pekinese pups. I should like to lecture them myself, but I fear they would not acclaim me at the conclusion. I feel something of that antagonism of which I wrote last week. I should like to form children into a Society for the Study of Mothers, and I would promise them interesting psychological phenomena when we got below the surface of our subject.

Fathers, I think, do not as a rule require lecturing to on the Study of Children. Should there be any father in doubt as to best methods, I can put him on the track at once, and without a lecture. Don't attempt to study children, they are far beyond the powers of your understanding, and will upset all your theories. Let your son study you. Set him the example in living, and call him "Old Chap" or "Old Fellow." Always when I hear a good father call his little son "Old Fellow," I know that child is on the way to honourable manhood.

A child's mind is extraordinarily perceptive, and example appeals to him beyond measure. Whether it be as an Engine-driver, or as an Officer in His Majesty's Army or Navy, little Willie always wants to be "like Daddy" when he grows up, and object lessons are the greatest teachers. Child Study Society! Great Scot! Most of these *mothers*—if such there really be—would benefit in experience by watching a cat tend her kittens. But I do not believe it necessary. Inept as we live in the twentieth century, twenty centuries of ineptitude could not eradicate maternal instinct. An example.

Last week the Channel Boat brought over a little Belgian refugee mother. Little more than a child herself, she yet cuddled to her, in an only shawl, concrete evidence of Hun "Kultur" thrust upon her in the presence of her afterwards murdered parents. Her eyes, flashing at the thought of her wrongs, were instantly changed to express love and tenderness at a whine from her child, whom she nestled more closely to her, and cooed to silence. God grant that that son shall prove a blessing to his tender Mother, and live long to hate his unknown father. (Small f, Mr. Compositor, please.) But to get back to our lecture.

It was, as I have said, on Air Raids as Seen by

Children, illustrated by a series of essays by school children, eleven to thirteen years of age.

"Even at that age, the girls looked after the younger children." Damning evidence against the necessity of the Child Study Society, unless it be that I am mistaken in their object, and that it was formed in order that the study of children should be beneficial to mothers, which is as like as not the case, and quite capable of bearing good results.

"At nine, the boys thoroughly enjoyed the raid, spending as much time as possible in the streets." Of course they did. British boys would. One boy wrote:—"A picture over mother's bed fell on her head and on baby—." I believe had a picture fallen on the head of one of those lectured, under like circumstances, it would not have hurt baby—Baby would have been in the night nursery robbing some other poor mite of its natural sustenance.

"At twelve, the boys still gave no sign of fear, but began to hunt for souvenirs." Little rats—also guilty of scrumping in orchards on occasion, I'll be bound!

The following is an extract from the copy of a boy of eleven: "My cousin pointed to a star and said she thought it was a Zeppelin. 'Fathead,' said I, politely. 'It cannot be a Zeppelin. It does not move.'"

Though I cannot agree with his views on politeness, I feel sure that boy must read "FLIGHT." Indeed, I dare say he could have told her that the star was Jupiter.

"Throughout the essays there was evidence of the mothering attitude of young girls towards those more helpless." I feel sure I was mistaken as to the objects of that Society. But why is it, if, as we well know to be true, the mothering instinct is so strong in girls of older school-age, it becomes wanting in women of greater years? Perhaps—but there, I am a mere man, engaged with most other men in denying women their rights as free and independent beings, and so cannot be expected to understand, or understanding, cannot be expected to admit.

I am no Sherlock Holmes. I have eyes without seeing. I could not tell you off hand how many steps there are up to my sleeping apartment, though I have climbed them these many years, and I should make but a poor guess at the pattern of the wall-paper, even if there be any pattern at all. But I can see the future of the boy who wrote this:—"Suddenly a piercing beam of white light shot across the sky. Guns spat viciously out of the darkness at a cigar-shaped body far up in the clouds." I can tell him that his goal lies in a great city—in that portion of it bounded respectively by an obstructive memorial and a busy circus—and built over an old ditch. Starting from the memorial he shall step so many paces toward the rising sun, which number of paces shall be conveyed to him later by letter in reply to his application.

And in time to come, when, old and worn, I shall enliven the evening of my days by reading the efforts of others, I know I shall find entertainment in the article of "Our Special Correspondent."





SATURDAY last was one of the few days of the year when even those of us who have come to regard flying at Hendon as a certainty, or practically so, should not have felt disappointed at finding every machine in its shed. It was in this mood that I approached the aerodrome about mid-day prepared for a tour of the hangars and a chat with such *habitués* as had not left the ground in quest of warmer climes. As I neared the gates a BE2c was circling around having a pretty rough time of it at the low height at which it was flying. The BE was not long to be the only wind-fighter up, for no sooner had I passed Mr. Plant—the St. Peter of the aerodrome, as one of my colleagues is pleased to call him—than I saw a little Caudron-type biplane hopping off the ground over by the railway, and struggling along towards the sheds in the teeth of the wind. The wings were warping like fury, and the machine rose and fell as she met the gusts. Tearing along over the sheds and making towards the “Welsh Harp” at a speed which must have been at least a couple of miles

per hour, there was just time to catch a glimpse of the name painted on the rudders. It read “Moore.” Now I have always been of the opinion that friend Moore was going to blossom into a jolly fine pilot one of these days, but I will admit that I had not fully realised that he had already “arrived.” His wind-fighting on Saturday leaves no doubt about it, however. For the first few hundred feet his control lever would, I should think, had it been fitted with a pencil on top, bearing against a sheet of paper, have traced some curves that none of the swinging pendulums of our childhood need have been ashamed of. After a while Moore seemed to get into a steadier wind, and was then soon lost in the clouds. Later on when he had had enough of it he made a perfect landing in spite of the gusts that tried to play at tossing the blanket with him.

x x x

Reference was made in these columns recently to some school machines built by the London and Provincial Aviation Co., of Hendon, for the Bournemouth



飛行界第二卷第十號十一月號目次 (大正四年十一月一日發行)

本欄

■ ツエッペリン式飛行船の戰術的價值 社説 (二)

■ 在米日本人飛行家と米國飛行界 中澤家康 (九)

■ 露軍の敗北と空中防備の缺陷 相羽育一 (五)

■ 航空力學 內藤邦策 (二)

■ ニュウボール式の發達と其構造 山根天海 (二九)

■ 最新型軍用複葉機の研究 相羽生三 (五)

■ 飛行家の見た未來の人間 某海軍飛行中尉 (四二)

■ 娛樂用としての新飛行機ハミルトン式 中田吉二 (四三)

■ 新機軸を出せるマンヌ式飛行機 山口十一郎 (四九)

■ ライトの研究道程 倉富砂郎 (五三)

■ 新機軸の飛行艇いろく 山根天海 (五七)

■ 虹の都の空より 烈風 寫生 (六五)

■ 最新式發動機の研究 在米 烈風 史 (七一)

■ 天才飛行家アト・スミス物語 在米 野副重正 (七五)

■ 戰亂渦中の佛國飛行隊より 佛國飛行大尉 滋野清武 (七八)

■ 大演習參北 (北へ戦ひの地へ) 加賀飛行 一記 者 (八〇)

消息

■ 海外 理想的の發火機 英國聯發の動機 空中水雷の出現 新機軸測定器の效果 空中戰と女流飛行家の奮起 未來の武器は微菌彈 獨逸の軌道攻撃用飛行機 青島落ちの飛行中隊 和利飛行機の威力 スミス重傷を負ふ 壯烈なる空中戰 軍艦の飛行練習

■ 内地 岩富中尉重傷を負ふ 空中の分別式 海軍飛行機洋上に墜す 新飛行家歸朝 偵察機演習 海軍航空隊の新勢力 野外偵察飛行 空中から水雷發射 追濱の月明飛行 練習飛行と曳火彈投下 小園中尉代る 岩富中尉快癒 海軍飛行機改稱 尾崎氏の卒業飛行

表紙	口繪
機上のアト・スミス	大演習 飛行機 東北大飛行機 中將軍用飛行機の各部 新機軸マンヌ式 新飛行家重傷を負ふ 二面より飛行機 公園内に飛行機墜落

ADVERTISING à LA JAPAN.—In our issue for December 10th we reproduced an article on military aviation in Japan from the Japanese *Aeronautic World*, a monthly magazine published in Tokyo. The original method of handling the advertisement matter in this Japanese publication is very striking, and above we reproduce, by way of a specimen, a reduced copy of one of the announcements from our contemporary. If any of our readers are sufficiently conversant with the Japanese language we should be pleased to convey an idea to our readers of the announcements—no doubt extremely interesting—in Japanese characters.



Aviation Co. Chancing to meet Mr. F. E. Etches, whom I knew to be one of the moving spirits of this new firm, the other day, I lost no time in getting him to open out as to the progress he had made with regard to the new flying school he was starting. We were soon in the thick of aviation topics in general and flying schools in particular. It appears that Mr. Etches, who will be remembered as at one time manager to the late Mr. Hamel and later to Mr. (now Lieut. R.F.C.) F. Goodden, has been getting things on the move down south. The result is that the Bournemouth Aviation Co. has secured a very fine flying-ground just outside that popular South Coast resort, where shed accommodation is already provided for the school machines, of which two are actually on the ground, the 45 and 60 h.p. Anzani-engined L. and P. biplanes, referred to in "Eddies" last week. Two more are following shortly, both single seaters. One will be fitted with a 35 "Y" type Anzani, and the other with a 40-45 h.p. engine of the same make.

x x x

The flying ground itself is beautifully level and—a very important factor—well drained, the soil being of a gravelly nature. An area of between 200 and 250 acres is available, on which there are no large trees. A few low hedges that cut across the ground in places are not thought likely to interfere with the school work to any extent. Long runs are available for rolling and "straights." For more advanced pupils who wish to get experience in cross-country flying, permission has been obtained from the Home Office to fly over an area of about fifteen miles radius to the north and west, about five miles to the east, and a mile or so to the south and south-west. As the new aerodrome is situated at Talbot village, north-west of Bournemouth, it is just about a mile from the centre of the town, and less than five minutes' walk from the trams running to Winton.

x x x

As the 'drome is well sheltered on practically all sides, and fogs are mainly conspicuous by their absence, it is hoped that it will be possible to have school going nearly every day all the year round, and quick tuition is, I understand, to be one of the features. Should a pupil wish to gain a little extra practice after obtaining his certificate, it is there for the taking. Those who would like to be on the spot, so as to draw full advantage of early morning calms, will be able to find comfortable "digs" within a few minutes of the aerodrome on the Talbot Estate. It seems to me that for many contemplating taking up aviation, a visit to Bournemouth, and a look round the new school to ascertain its methods, should well repay them. Everything being well, it is expected that school work will be in full swing before the beginning of the new year. Of the instructors who will look after the tuition, mention may be made of Mr. F. King, who obtained his *brevet* some time ago at the Ruffy-Baumann school at Hendon.

x x x

As briefly announced in our last issue, the marriage of Flight-Commander S. V. Sippe, D.S.O., R.N.A.S., to Miss Mabel D'Arcy, took place at the Church of the Assumption, Warwick Street, on Thursday of last week, the bride being given away by Lord Athlumney. Flight-Commander Sippe, it will be remembered, took part in the historical raid on Friedrichshafen as well as in the raids on Cologne and Düsseldorf and other meritorious

exploits which won for him the D.S.O. and the Legion of Honour. Before the war Mr. Sippe was best known for his piloting of the Bristol machines, of which he has tested and demonstrated a great number in pretty well all parts of the Continent. Heartiest congratulations to the happy pair.

x x x

Forty-five miles in 24½ minutes is pretty good going, don't you think? Yet aforesaid distance was covered in the aforesaid time the other day by Mr. Sydney Pickles. I can see in my mind's eye the censorial thumbs twitching in their eagerness to turn anti-skywards. It is O.K., however, I am not giving figures of one of our really fast machines, the secret of the high speed having not so much to do with the 'bus itself as with the generosity of my great namesake, who lent a helping hand. It came about in this way: Pickles had been testing some machines at Bognor, and as there was a Short pusher waiting to be delivered at—some other South Coast station, and shed accommodation were none too plentiful at Bognor, Pickles was asked if he would undertake the flight. Being nothing if not a good sport he agreed to try, and as soon as he and his passenger were seated and the engine started the 'bus jumped into the air, hardly making any headway against the wind. As soon as she was turned towards the east, however, she got up speed, and keeping out over the sea, Brighton was passed and left behind. Climbing to about 3,000 ft. the "bumps" became less violent until Pickles got abreast of his destination. By the time a turn had been made into the wind the aerodrome he was making for had been considerably overshot, and a fight had to be made for it. Here the gusts came in chunks over a well-known promontory, and Pickles and his passenger had a pretty



Flight-Commander S. V. Sippe, D.S.O., and his bride.

rough time of it for a few moments, dropping at one time some 500 ft. when running into a "pocket." However, eventually a safe landing was effected by keeping the 80 Gnome going all out while coming down. As a result, the air station at—somewhere on the South coast, can boast of one of their school machines having made one of the fastest cross-country trips on record, at any rate for a machine of this type.

x x x

Speaking of Pickles reminds me that Mr. C. B. Prodger, who, it will be remembered, was Pickles's assistant, has now joined up in partnership with him, and that, should necessity arise, the work of testing machines may be divided so that Mr. Prodger will tackle the testing of land machines, while Mr. Pickles will attend to the seaplanes. By this division of the work manufacturers will never have to wait before they can have their machines of either type put through their trials.

x x x

Just at the moment of writing these lines Pickles comes in to tell me that he has *not* been blown up by a bomb accidentally exploding! Once more, how *do* these rumours get about?

x x x

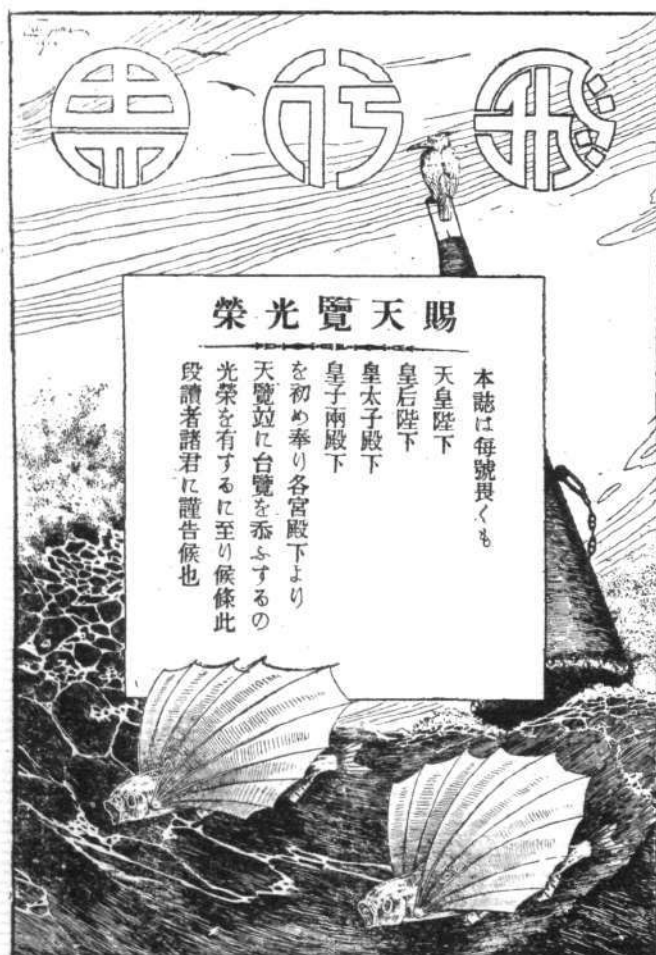
It is with the greatest regret that one learns of the accident which caused the death of Lieutenant Gaston Caudron. Reliable information regarding details of the

accident is not available, so that at present it is only possible to state that according to reports, Caudron was testing a new machine and had been flying for about a quarter of an hour when the machine turned over, and Caudron and his two passengers are said to have been killed instantly. It is always hazardous to venture a guess without knowing all the facts of the case, but it seems probable that the inclement weather conditions may have been responsible. In Gaston Caudron, who, with his brother René, was the designer of the highly successful machines bearing his name, France loses not only a clever designer and constructor, but a pilot of more than average ability. Indeed, the loss is not only France's but Britain's as well, seeing that the British Caudron Co. are building machines under licence and that therefore the original drawings emanate from the French Caudron works.

x x x

It is indeed a sad record for France, when looking back over the years gone to the several pioneer firms of aviation which have established fraternal partnerships. First there were the Voisin brothers, one of whom was, if my memory serves rightly, killed in a motor car accident; then there was the Nieuport firm, of which two brothers gave their lives in the cause of the science. Now we have to bear the loss of one of the Caudron brothers. May the last remaining brother-partners—the Farman—escape the fate of the others.

ÆOLUS.





## AIRCRAFT AND THE WAR.

Writing to the *Morning Post* from the British Headquarters, Mr. H. F. Prevost Battersby said:—

"There is very little doubt, for example, that the Germans have been making the most strenuous efforts entirely to reorganise their air service, and that they have been constructing machines of greatly increased power, of unusual carrying capacity, and capable of prolonged and extremely rapid flight. It is, of course, one thing to construct such an air fleet and quite another to succeed in handling it, and, so far, on this front there has been no reported observation of any of these particular machines to which the German papers have of late been making guarded but exultant reference; but at least one machine has been noted of a distinctly novel pattern, which apparently was out for trial purposes, as it made off at the first hint of an opponent, and showed in retirement a quite remarkable turn of speed. It has not since reappeared, but that, in the weather we have been enduring—strong south-westerly gales and rain-clouds that allow no range of vision—is not remarkable. Thus in the matter of aircraft we have sufficient evidence to warrant the assumption that the enemy is taking every means in his power to secure that superiority overhead which ceased to be his in the early days of the war. Such determined endeavours, the effects of which cannot be felt for some months, until weather with more opportunities for the airman shall have returned to us, can hardly be regarded as evidence of any desire for immediate peace."

A message from Reuter's special correspondent at the Dardanelles, dated December 3rd, contained the following:—

"Apparently the severe weather, combined with our aeroplane and ships' bombardments, are considerably hampering the enemy's lines of communication. Recently the Turkish artillery has been more active, but the bombardment of one section of our trenches for nearly two hours was not followed by any attack."

The Geneva correspondent of the *Temps* learns that

the Austrian naval force which bombarded San Giovanni di Medua on December 4th was accompanied by two aeroplanes.

A Reuter message from Zurich, dated December 10th, stated:—

"A Russian aeroplane dropped a bomb in the vicinity of Czernowitz station on Tuesday afternoon."

From Rome on December 10th Reuter received the following message:—

"Four enemy airmen appeared over Ancona this afternoon and dropped bombs, killing two persons and wounding some others. No damage was done to property."

The *Times* correspondent at the British Headquarters, writing under date of December 11th, said:—

"There was another British air raid last Wednesday on Miramont, north-east of Albert. Although a 60-mile gale was raging, further damage was done to the stores and buildings of this important supply depot, which, it will be recalled, was bombed by our machines on November 30th."

In a message from Boulogne, dated December 11th, regarding a bombardment by British warships of the Belgian coast, the *Daily Telegraph* correspondent said:—

"A German aviator made an attempt to fly over our ships, but he was forced to return to his hangar, near Ostend, before he had got half way. As soon as the machine alighted, and had been placed in its shed, a number of shells hit the place, and completely destroyed it and its precious contents."

"A number of small anti-aircraft guns were destroyed by the British shell-fire, and three large guns were hit and put out of action."



SOMEWHERE WITH THE GALLIPOLI EXPEDITION.—A British seaplane just after its return from a reconnaissance.



## Bells and Air Raids.

REPLYING to a question asked in the House of Commons by Commander Bellairs whether he would order that church bells and clocks striking the hours in London should be silenced during the hours of darkness, Sir John Simon last week stated:—

"I understand that in some towns it has been arranged to stop the ringing of church bells and the striking of church clocks, but I am advised by those responsible for the defence of London from air raids that in London they contribute so small a part of the general noise that it is not, as a rule, necessary to take this step. I have not heard of their causing trouble to wounded soldiers, but that would be a matter for the War Office."

## Tales the Germans Tell.

A STATEMENT issued by the Press Bureau on the 9th furnishes another instance of the misleading "news" circulated by the notorious Wolff Bureau. The statement is as follows:—

"Berlin, December 1st (Wolff).—In his report of November 29th Sir John French states that a German submarine was destroyed by an English aviator near Middelkerke. Wolff's Bureau hears from an authoritative source, however, that this report is totally untrue." (*De Telegraaf*, December 1st.)

"Wolff's Bureau says: In spite of yesterday's dementi, Reuter's Agency repeats, upon detailed information received, particulars of the air fight in which a British aeroplane broke the back of a German submarine with a bomb. On application to the proper authority, Wolff's Agency is informed that, if Reuter is correct, the sinking of a submarine must be that of a British or French submarine by a

British aeroplane, as there can be no question of a German submarine being involved." (*Der Tag*, December 3rd.)

December 9th, 1915.

"With reference to the above German statements, one of which appeared in *De Telegraaf* of December 1st, and the other in *Der Tag* of December 3rd, it should be noticed that the denials are not official, but are so worded as to give readers the impression that they have read an official denial of the destruction of the German submarine off the Belgium Coast. That, however, is not the case, and no authority for the denial is specified."

## German Violation of Swiss Neutrality.

THE *Morning Post* correspondent at Berne, writing under date of December 8th, said:—

"Only a few days ago a German aviator flew over Swiss territory in the direction of Basle. The German Minister at Berne immediately waited on the Swiss Government, to whom he apologised, promising that such incidents should not recur. Since then, however, another German airman has twice flown over Swiss territory near La Chaux de Fonds, where recently a German airman dropped bombs. It is rumoured that these flights over La Chaux de Fonds are not mere accidents. As a Swiss remarked to me, these German apologies are very cheap, and Germany will apologise to-day and do precisely the same thing to-morrow if it suits her purposes. There is a great contrast between the hubbub made by the German-Swiss Press on the occasion of the Friedrichshafen raid by Allied airmen and the obscure manner in which the last visits of German airmen have been reported."



"Life is a mirror—smile at it and it will smile back; frown at it and it will frown again."

## Aerodrome Memories.

THE hours I spent with thee, old sport,  
Are more than all the girls to me;  
I count the price for which thou must have bought  
Thy hosiery.  
Each day we meet, each day a pair  
More bright than yesterday's I see;  
Thy suits thou wearest to the end, but ne'er  
Thy hosiery.  
O brilliant stripes that flame and burn;  
O lurid checks and striking clocks!  
I shut my eyes and strive at last to learn  
To bear thy socks!

*Weekly Telegraph.*

TEACHER: "What happens when a man's temperature gets as low as possible?"

SMALL PUPIL: "He gets cold feet."—*Ideas.*

## The Altitude Record Craze.

MISTRESS: "Cook the dinner on the patent petrol stove to-day, Johnson."

JOHNSON: "Well, I began to, mum, but the stove went out."

MISTRESS: "Light it again, then."

JOHNSON: "Yes, mum; but it's not come back yet. It went out through the roof."—*Passing Show.*

## Oh, those Boys!

BROTHER (to sister engaged in stitching a pink silk collar to a "nightie"): "Hello! Sis. Wedding or Zeppelin?"

## Real Grit!

PULLMAN ATTENDANT (to sleeping aviator home from the front on short leave): "Reading, sir!"

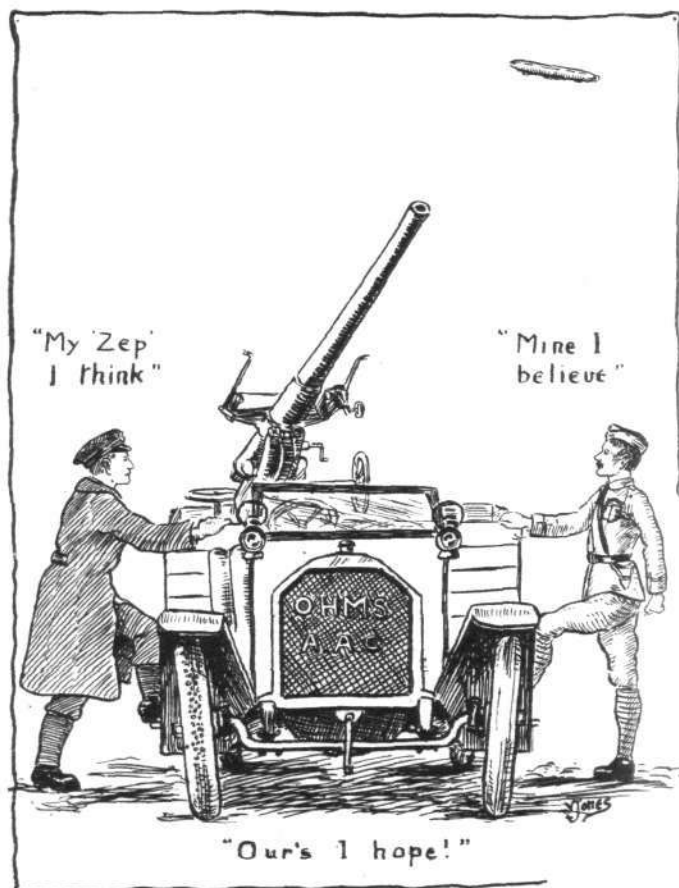
AVIATOR (rousing up): "Ready? Right ho." (Switches on the electric light.) "Contact!"

## Unrecorded Sayings of Popular Pilots and Their Friends.

"CAN you direct me to the hosiery department?"—M.D.M.

"GEE! Another pupil!! Have a cigar?"—G.W.B.

"YAS, but at the same time —."—A.M.R.



The Protection of London from Aircraft Raid Muddle (with apologies to "The Girl in the Taxi").

# Models

ALL communications in connection with this section should be addressed to the Model Editor, "FLIGHT," 44, St. Martin's Lane, London, W.C. Correspondents are requested to write on one side of the paper only.

## The Public Interest in Models.

UNDER the *nom de plume* "Scale Model," one of our readers has sent us the following interesting comments on the lack of interest taken by the general public in aero models:—

The note from Mr. J. V. Winter in your last issue raises a very important point, and one which merits the serious attention of those who are interested in model aviation. It is the fact that the models which are usually seen in club competitions bear but a very remote resemblance to full-sized machines. They are, in fact, little better than "flying sticks," whatever the speed or distance record enthusiast may care to say against such a scornful appellation. It has often been noted that members of the general public who have been watching such a competition, recognising the lack of similarity, have asked why there should be such a difference. On it being pointed out to them that the models have been developed to obtain the greatest speed or to fly the longest distance in competitions, they will instance the fact that although competitions are held for model yachts, yet the models still remain miniature replicas of full-sized racing yachts. That is no doubt due to the fact that rules have been wisely framed to prevent the development of extreme types in which one certain feature is sacrificed at the expense of another. That those rules have that limiting influence does not seem to have diminished the interest taken in the contests. In point of fact, it makes the competition all the more keen, as every man does his level best to get the utmost out of his boat, and he knows that his opponent is bounded by the same limitations as himself, and if he is beaten it is his own fault.

There would appear to be no real obstacle to the framing of rules which would keep aero models so that their general lines were more in accord with full-sized practice. It will no doubt be argued that there would be considerable difficulty, as the fact that an elastic motor has to be used would so affect the weight distribution that the similarity would be lost. That, however, is not really so, as it is quite possible to build a scale model of almost any type of full-size machine, and make it fly with a rubber motor. Why not have classes for types which have proved successful in full-sized work? Thus there could be speed competitions for scouts. Then why not try a weight-lifting competition? Such suggestions as these offer wide possibilities, and if properly handled by the executive of model clubs would do a tremendous lot to revive interest in model aeroplaning, which is fast fizzling out. It is recognised, of course, that most of the enthusiastic secretaries and other officials who worked so hard to carry on the work of the model clubs have now joined up with either one or other of the Services, but whereas before the war only a few were interested in aviation now almost everyone knows something about airships and aeroplanes, and model clubs should take advantage of it. An endeavour should be made not only to foster that interest but to deepen it, and by so doing to make sure that military aviation secures its rightful place in our national defences in the future. If models such as those mentioned were to be seen in competitions, the general public would undoubtedly begin to take interest in them, as they would recognise that they were in fact

models of the aeroplanes which have enabled so many gallant deeds to be done in this great war.

It will possibly be urged by some that to frame rules on the lines suggested would tend to destroy initiative, and so prevent development, but that should not be so. It has not proved to be the case in connection with model yachting. At any rate there is plenty of

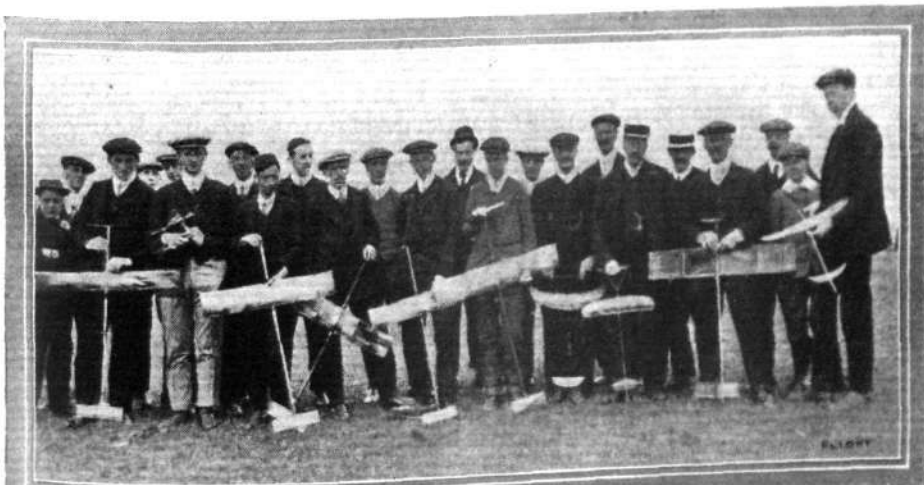


ANOTHER PRE-WAR REMINISCENCE.—Members of the Folkestone, Dover, and Canterbury Aero Clubs at an inter-club meet.

keen competition between the members of a club, and, what is more, whenever a few model yachts make their appearance on a pond there is sure to be a good crowd watching the sailing.

There is another side to the question. It is that with the model maker who works with a "flying stick" concentrating upon the improvement of the speed and distance records, he takes very little interest in the scientific side of aeroplane design. That is most likely to be the reason why aero-modelling does not get a lasting grip on its followers generally. If it were possible to keep the models in harmony with the designs of full-sized machines, it would probably mean that the modeller would take a much more serious interest in aerodynamics, and begin to work on scientific lines, instead of by the rule-and-thumb method, which, although it may produce some startling results here and there, does not pay in the long run. Model-making has suffered a good deal from it in the past.

It would be useful if the readers of this page would contribute their views on this matter, and I hope the discussion will lead to a new life being given to model aviation, a pastime which could, if fostered and developed on sound lines, do a great deal for the furtherance of aviation generally.



A reminiscence of pre-war days—some members of the Coventry Aeroplane Building Society with their models.



## The Fatality at Hendon.

AN inquest was held on Monday on Flight Sub-Lieut. George Armitage, R.N.A.S., who was killed at Hendon on Saturday.

Evidence given by Flight-Commander Busted showed that the biplane, in which Sub-Lieut. Armitage was a passenger, was upset by a gust of wind and nose-dived to the ground. It burst into flames. He attributed the accident to the biplane being at an insufficient height to recover when it upset.

Medical evidence showed that death was due to concussion and shock, following injuries to the head and burns on both legs, and the jury returned a verdict of "Death from misadventure."

## The Fatal Smash at Birmingham.

AN inquest was held on the 11th inst. on Lieutenant Cyril Talbot Burney Croft, 24, 8th Somerset Light Infantry, who was killed on December 8th, near Birmingham in an aeroplane accident.

According to a statement made by the pilot, Lieutenant McDonald, who was seriously injured, he noticed that the engine was missing fire when he was at a height of 1,500 ft., and decided to land. He turned off the petrol, but did not switch off the electric ignition. The machine did not answer the control, and though he did all he could to get the machine into normal position, it crashed to the earth. He did not think the machine got into an air pocket; he was not a believer in air pockets.

The jury returned a verdict of "Accidental Death."

## A Blue Armlet for R.N.A.S. Recruits.

It has been announced that the Admiralty have decided to issue an armlet of blue serge, bearing a red anchor, to those recruits in naval units, including the Royal Naval Air Service, who enlist under the Group System and are waiting to be called up. The armlet will also be issued to petty officers and men who have been discharged on medical grounds, since the commencement of the war. The armlets will be issued under similar conditions to the khaki armlets issued by the War Office.

## Boys Wanted for the R.N.A.S.

It is announced that boys between the ages of 17 and 17 years and 6 months are required for training as wireless telegraphists in the Royal Naval Air Service. Written application should be made to the Wireless Offices, Clement-Talbot Works, Barlby Road, North Kensington, stating clearly exact date of birth, school, and further education received, and all particulars of subsequent employment.

## Flying from Toronto to New York.

ON November 26th, Victor Carlstrom arrived at New York City in a Curtiss "R" military tractor fitted with a "V-2" 160 h.p. Curtiss motor, the start having been made from Toronto, Canada, the day before, when Carlstrom covered about 350 miles to Binghamton, N.Y. Owing to the head wind encountered, the balance of the trip could not be made before dark, but it was accomplished on the following day, making a total distance covered in the two flights of about 550 miles. Had Carlstrom been favoured with a westerly wind, which is the prevailing direction at this time of the year, he would have made the trip in one flight, but a strong south-easterly wind was blowing, however, and although the machine was capable of 85 miles per hour, the wind prevented this being attained. The altitude during the trip ranged between 5,000 ft. and 8,000 ft.

## Testing a 160 h.p. Curtiss Motor.

We have received the following particulars of tests which were made on November 24th with one of the V-2 Curtiss 160 h.p. Motors. It was first put on a Sprague electric dynamometer at the Works, and starting at 8 a.m. was run for eight consecutive hours at 1,400 revolutions per minute. Then it was transferred to a testing stand and run for 17 continuous hours with a calibrated paddle attached, at a speed which developed always above 160 h.p. It was stopped to allow some slight adjustments in the magneto, but after a delay of only a few minutes, was again started, and at the same speed, run continuously for 66 hours and 30 minutes, then being stopped only to make some specified propeller tests. At the end of the 66½ hours full power running, an examination showed the motor to be in perfect condition.

## More Zeppelins Reported Destroyed.

ACCORDING to the *Ribe Stiftstidende*, which is generally very accurate in its news, three Zeppelins were destroyed during November. In addition to the "Z 18" which was destroyed on November 17th at Toender, the "Z 28," stationed at Fuhlsbüttel, near Hamburg, is stated to have exploded, while during the last days of November another Zeppelin, the number of which is unknown, was totally destroyed at Bitterfeld, in Saxony.

## Four Killed in German Collision.

A REPORT from Rosendael states that two German aeroplanes collided while flying at the military aerodrome at Etterbeck, near Brussels on December 6th. Both machines were smashed, and the pilot and passenger in each were killed.

## The "Wellcome" Photographic Annual.

ONE of the newer arts which has proved of importance in the world war is photography, and it is not surprising to learn that the tabloid system of development, &c., has been in great demand. To those who have to do with photography, whether they are amateur or expert, a most welcome gift is the Wellcome Exposure Record and Diary—a little volume which stands pre-eminent as a useful guide to the art in its varied phases.

A rich harvest of extensive experience and expert skill is stored in this wonderful little volume. It informs and advises on everything—on photography by night and the correct quantities of flashlight powder; on green, or sepia, or blue toning of bromides, or warm tones on gaslight papers; on time and factorial development, the intensification of colour plates, exposures for interiors, the speeds of bromide papers, the staining of prints, &c. Not one of the varied aspects of the art appears untouched, and besides all this there are instructive tables, simple formulæ and a multitude of useful hints.

Of especial value is the "Wellcome" Exposure Calculator, an ingenious rotary device, fixed to the back cover, which, by one turn of one scale, indicates the correct exposure of any plate or film at any time of day or year. For British, Colonial, American and Continental plates and films independent exposure factors are given.

Of the "Wellcome" Photographic Exposure Record and Diary three editions are published—for the Northern Hemisphere, the Southern Hemisphere, and for the United States of America.

The "Wellcome" Exposure Record can be obtained from all photographic dealers and booksellers. Price in the British Isles, one shilling.



## IMPORTS AND EXPORTS, 1914-1915.

AEROPLANES, airships, balloons, and parts thereof (not shown separately before 1910). For 1910 and 1911 figures, see "FLIGHT" for January 25th, 1912; for 1912 and 1913, see "FLIGHT" for January 17th, 1914; and for 1914, see "FLIGHT" for January 15th, 1915:—

	Imports.		Exports.		Re-Exportation.	
	1914.	1915.	1914.	1915.	1914.	1915.
	£	£	£	£	£	£
January ...	5,945	20,382	210	435	879	13,706
February ...	28,132	380	106	138	441	18,823
March ...	27,731	280	1,934	7,218	1,440	5,090
April ...	11,384	2,189	1,175	23,986	1,473	275
May ...	17,062	178	4,059	12,530	9,484	8,250
June ...	15,967	5,469	5,082	3,730	142	2,400
July ...	15,548	1,240	4,994	13,372	1,695	—
August ...	52,448	664	630	36,276	910	247
September ...	4,859	536	—	4,908	—	—
October ...	39,287	1,344	325	17,702	—	—
November ...	24,598	1,859	141	21,979	104	—
	242,961	34,521	18,656	142,274	16,568	48,791

## SPECIAL NOTICE.

CHRISTMAS HOLIDAYS.—Owing to Christmas Day falling on Saturday next week, it is necessary for FLIGHT to close for Press on December 22nd. All copy, Editorial or Advertisement, must therefore be at the Office, 44, St. Martin's Lane, W.C., not later than first post December 21st.

## FLIGHT.

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